TEXTILE TECHNOLOGY DIGEST

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ABSTRACTS

FIBERS A

FIBERS. C. S. Grove, Jr., R. S. Casey and J. L. Vodonik. Ind. Eng. Chem. 49: 1599-1603 (Sept. 1957). (2719)

A review of fiber developments and literature for the past year under the headings: new fibers, properties, research, industrial uses, filtration, coated fabrics, nonwoven fabrics, textiles in the plastics industry, blending, and finishes. 80 references.

COARSE FIBERS: FUNDAMENTAL PROPERTIES OF BRUSH FILLING MATERIALS. E. B. Slack. Wheatland Journals, Ltd, London, 1957. 214 p. 2 £ 2s. (2720)

This book was written primarily for the layman, to enable brush manufacturers to understand better the many coarse fibers they use as filling materials. Its chapters cover: elementary principles, physico-chemical construction of fibers, biological structure of animal and vegetable fibers, factors which influence the physical properties of fibers, methods of testing fibers, methods of testing entire brushes, notes on individual animal fibers, notes on individual plant fibers, synthetic and regenerated fibers, and special processing of brush filling materials.

FIBER SURFACES AND THEIR INFLUENCE ON THE PROPERTIES OF COTTON TEXTILE MATERIALS. B. C. M. Dorset. Textile Mfr. 83: 460-464 (Sept. 1957). (2721)

Fiber surface features such as roughness or smoothness, porosity, indentations, electrical properties, rigidity, etc., are considered in relation to processing control and soiling.

TEXTILE PROPERTIES AND FIBER MARKETS. E. R. Kaswell (Fabric Research Laboratories, Inc.). Am. Dyestuff Reptr. 46: 689-693 (Sept. 23, 1957). (2722)

The author discusses trends in the interfiber competition of the natural and synthetic fibers in United States markets. Tables. Graphs. 12 references.

NATURAL FIBERS A 1

TECHNOLOGICAL REPORTS ON TRADE VARIETIES OF INDIAN COTTONS, 1956. R. L. N. Iyengar. Indian Central Cotton Comm. Technol. Bull. Ser. A No. 91: 1-92 (Mar. 1957). (2723)

TECHNOLOGICAL RESEARCH ON COTTON IN INDIA. C. Nanjundayya. Indian Central Cotton Committee, Technological Laboratory, Matunga. Bombay 19, India. 1957. 205 p. Rs. 3. (2724)

A resume of the work carried out at the ICCC Technological Laboratory during the period 1924-1956. Graphs. Tables. Photographs. List of ICCC publications.

PREDICTION FORMULA FOR ESTIMATING THE SPINNING VALUE (H. S. W. C.) OF DESI COTTONS GROWN IN MADHYA BHARAT FROM THEIR FIBER PROPERTIES. K. V. N. Nayar. Indian Cotton Growing Rev. 11: 312-319 (July 1957). (2725)

This study was undertaken to examine the exact relationship between the two fiber properties mean fiber length and mean fiber weight and the spinning value of the desi types of cotton grown in the cotton belt of Madhya Bharat. Tables. Graph. 8 references.

MOISTURE RELATIONS OF INDIAN COTTONS UNDER NORMAL TESTING CONDITIONS IN A LABORATORY. C. Nanjundayya and H. Navkal (Technological Laboratory, Matunga). Indian Cotton Growing Rev. 11: 40-52 (Jan. 1957). (2726)

The moisture relations of Indian cottons were investigated under atmospheric conditions that usually prevail in a testing laboratory. Eight Indian cottons covering a wide range of fiber properties were conditioned and weighed at different relative humidities on successive days. It was observed that all the cottons exhibited a hysteresis effect during the process of absorption and desorption of moisture. It may be stated, in general, that even though there is some variation in the amount of moisture absorbed by different cottons, the hygroscopicity of a cotton does not provide a basis to detect its origin nor does it depend upon its most important fiber-properties. Tables. Graphs. Diagrams. 18 references.

GUIDE TO INDIAN COTTONS. (revised). Indian Central Cotton Committee, 14, Nicol Road, Ballard Estate, Bombay, India. 1956. 74 p. 8 annas. (2727)

Area, production, yield per acre, spinning performance, and special characteristics of the different varieties of Indian cottons are presented.

INDIAN COTTON: ITS PAST, PRESENT, AND FUTURE. B. L. Sethi and K. Dharmarajulu. Indian Central Cotton Committee, Bombay, India. 1957. 54 p. Rs. 3. (2728)

COTTON MERCHANDISING CHANGES TO CONFORM WITH MODERN MILL REQUIREMENTS. E. E. Berkley (ACCO Fiber & Spinning Laboratory). Textile Research J. 27: 712-718 (Sept. 1957). (2729)

A discussion of the historical background of changes in mechanical harvesting, ginning, and baling is followed by an analysis of changes in cotton quality and properties and of cotton defects and their relation to processing. Diagrams. Graphs. Tables.

SIGNIFICANCE OF WOOL FIBER CRIMP. PART 1. A STUDY ON THE WORSTED SYSTEM. J. Menkart and J. C. Detenbeck (Textile Research Inst.). Textile Research J. 27: 665-689 (Sept. 1957). (2730)

Two batches of Merino wool, closely matched in fiber diameter and length, but differing in their crimp content, have been processed into worsted yarn on the French system and converted into fabric. The changes in the properties of the fibers through processing have been followed, and the properties of intermediate assemblies and of the fabric examined. The fiber crimp was found to persist through processing and to exert an effect on the properties of top, roving, yarn, and fabric. The wool with greater crimp content produced twistless assemblies with greater cohesion; performed better in spinning; gave rise to a bulkier yarn with lower stiffness in extension and lower breaking extension; and resulted in a thicker fabric with softer handle, smoother appearance, lower resistance to air-flow, slightly lower bending stiffness and better drape, and slightly better recovery from extension and from wrinkling. Crimp appeared to have no influence on the tensile properties of the fabric, or on its resistance to flex abrasion. Graphs. Tables. Photographs. 48 references.

CUMULATIVE SUPPLEMENT FOR 1945-56 TO WOOL STATISTICS AND RELATED DATA. U. S. Agricultural Marketing Service, Washington 25, D. C. Mar. 1957. 97 p. Statistical bull. no. 142. Available from Superintendent of Documents, Government Printing Office, Washington 25, D. C. 55 cents. (2731)

Statistical tables concerning production, prices, consumption, and international trade in wool and other animal fibers.

ELASTIC PROPERTIES OF CHEMICALLY MODIFIED WOOLS AND THEIR IMPLICATIONS FOR THEORIES OF WOOL STRUCTURE. H. Lindley (Wool Textile Research Laboratory, CSIRO, Australia). Textile Research J. 27: 690-695 (Sept. 1957). (2732)

The changes in elastic properties produced by systematic changes of the number and kind of sulfur bonds are interpreted as implying the existence in the wool fiber of units joined longitudinally by disulfide bonds. Some possible implications of this concept are discussed. Graph. Table. 32 references.

THEORY OF FIBER EXTRACTION. CHAPTER 6. PRINCIPLES OF FIBER EXTRACTION. J. G. Thieme. Textile & Cordage Quart. 7, No. 2: 83-89 (1957). (2733)

The principal extraction methods are reviewed from the viewpoint of extraction as cell destruction, extraction based on the fact that fibrous cells contain no liquids, extraction based on the chemical resistance of fiber-cells, extraction based on length, strength, and flexibility of fiber cells. Extraction principles are classified in a table and extraction stages are discussed.

GLOSSARY OF FLAX, HEMP, AND JUTE THREADS AND TWINES. PART 1. T. H. Reid. Textile & Cordage Quart. 7, No. 2: 79-82 (1957). (2734)

MAN-MADE FIBERS A 2

U. S. MAN-MADE FIBER PRODUCERS. Textile Organon 28: 128-133 (Sept. 1957). (2735)

This directory, arranged by fiber group, lists manufacturer, sales offices, trade names, and plants.

MAN-MADE FIBERS. J. B. Goldberg. Textile Ind. 121: 113-162 (Sept. 1957). (2736)

This special section on man-made fibers contains: (1) description of each of the man-made fiber types in commercial U. S. production, (2) how mills run synthetics on the cotton, woolen, and worsted systems, (3) a chart giving properties, trade-names, and a list of producers' sales offices, (4) Textured filament yarns, by E. Stowell, p. 136-140, (5) What makes a fabric sell?, by J. Poupalos and C. Clutz, p. 141-143, (6) Dyeing the synthetic fibers, by G. T. Hug, p. 144-151, and (7) Chemical principles for the finishing of man-made fibers, by D. D. Gagliardi, p. 152-159.

POLYMERIZED FORMALDEHYDE: RAW MATERIAL FOR NEW SYNTHETIC FIBERS. A. J. Hall. Fibres 18: 257-260, 271 (Aug. 1957). (2737)

If formaldehyde is converted into its polymerized form under certain specified conditions, the resulting polymer is capable of conversion into stable and strong fibers and films by a kind of melt extrusion process. Polymerized formaldehyde has been known for many years but it is only recently that the conditions for converting it satisfactorily into shaped articles have been established.

HOW SYNTHETICS ARE USED IN BRUSHES. F. Kidd. Skinner's Silk & Rayon Record 31: 960-965 (Sept. 1957). (2738)

This survey of the use of man-made fibers in a wide variety of brushes includes a table of brush-filling information under the headings: chemical type, trade name, producer, and other remarks.

ZEFRAN. G. W. Stanton (Dow Chemical Co.). Textile Research J. 27: 703-712 (Sept. 1957). (2739)

The properties of Zefran, a nitrile alloy fiber, are described in detail. Fundamental differences between Zefran and other synthetic fibers are discussed and properties useful to the textile industry are emphasized. Tables. Graphs. Colored photographs.

DARLAN: THE FIRST DINITRILE FIBER. R. D. Smith (B. F. Goodrich Chemical Co.). Textile Research J. 27: 730-737 (Sept. 1957). (2740)

The structure and properties of Darlan fibers and fabrics are discussed. Graphs. Tables. 12 references.

ACRILAN: ITS PROPERTIES AND USES. W. H. Hindle (Chemstrand Corp.). Textile Research J. 27: 726-730 (Sept. 1957). (2741)

VEREL: EASTMAN'S MODIFIED ACRYLIC FIBER. H. W. Coover, Jr., W. R. Ivey, W. C. Wooten (Tennessee Eastman Co.) and R. T. Crawford (Eastman Chemical Products Inc.). Textile Research J. 27: 745-750 (Sept. 1957). (2742)

The physical, chemical, and functional properties of Verel are discussed. Graphs. Tables. Photomicrograph.

ORLON ACRYLIC FIBER. W. W. Heckert (E.I. du Pont de Nemours & Co.). Textile Research J. 27: 719-725 (Sept. 1957). (2743)

A review of the properties, uses, and recent advances of Orlon fibers, fabrics, and blends. Graphs. Tables. Photographs.

CRESLAN. C. W. Bendigo (American Cyanamid Co.). Textile Research J. 27: 701-702 (Sept. 1957). (2744)

A short survey of the properties and dyeability of American Cyanamid's new acrylic fiber Creslan.

INERTNESS, COVERING POWER, AND THERMAL PLIABILITY CHARACTERIZE DYNEL. J. M. Swalm (Union Carbide Chemicals Co.). Textile Research J. 27: 738-744 (Sept. 1957). (2745)

The properties, uses, dyeability, and antistatic finishing of Dynel are discussed. Graphs. Photomicrographs. 6 references.

YARN PRODUCTION B

DRAFT-CUT WAVE IN DIRECT SPINNING SYSTEM. K. Fujino and A. Horikawa (Osaka Univ.). J. Textile Machinery Soc. Japan 3: 11-21 (June 1957). (2746)

The causes and the features of the draft-cut wave are described. The draft-cut process can be divided into three stages: stretching, breaking, and drafting. The drafting process is affected by the breaking position, and is one of the major causes of the draft-cut wave. The method of drawing the draft-cut wave from a staple diagram of sliver in some typical cases is shown. Diagrams. Graphs. Formulas. 3 references.

RECLAMATION OF WASTE FIBERS. Tomlinsons (Rochdale) Ltd. Textile Wkly. 57: 579-583 (Aug. 30, 1957). (2747)

Four machines are described and illustrated: the thread extractor, roving waste opener, run-down or thread preparing machine, and the hard waste breaker.

OPENING, PICKING, FIBER PREPARATION B 1

COMPARATIVE STUDY OF THE COMMERCIAL AND LABORATORY VALUATIONS OF THE COTTON LINT PRODUCED WITH CLEANING BEFORE AND AFTER GINNING. C. Nanjundayya and R. L. N. Iyengar (Indian Central Cotton Committee). Indian Cotton Growing Rev. 11: 221-232 (July 1957). (2748)

This investigation was undertaken to determine whether it would be commercially practical to remove trash before baling. It was concluded that the premium paid for improvement in the grade of the cotton was too small to make precleaning worthwhile. Tables. 3 references.

CARDING AND COMBING B 2

SETTING THE CARD WIRE RAISING MACHINE. C. Schau. Melliand Textilber. (English ed.) 38, No. 3: 218, 220 (1957). (2749)

JAPANESE CARDS FOR MAN-MADE FIBERS. J. Textile Machinery Soc. Japan 3: 43-62 (June 1957). (2750)

Detailed descriptions are given of Japanese carding machines manufactured by Howa Machinery, Ltd, Ishikawa Seisakusho Ltd, Kyowa Kikai Seisakusho Co., Ltd, Okuma Machinery, Ltd, Osaka Kiko Co., Ltd, Shinko Boki Co., Ltd, and Toyoda Automatic Loom Works, Ltd. Diagrams. Photographs. Tables. Graphs.

EXPERIMENTS WITH THE SUPER CARD. K. Mizukaga (Toho Rayon Co., Ltd). J. Textile Machinery Soc. Japan 3: 62-65 (June 1957). (2751)

Tests were run on the Super Card (Shinko Boki Co., Ltd) and a conventional flat card to determine their comparative ability to card man-made fibers. Neps, waste, staple diagrams, and yarn quality were tested. Graphs. Tables.

EXPERIMENT WITH NON-FLAT METALLIC WIRE CARD. F. Ikeda (Wako Spinning Co., Ltd). J. Textile Machinery Soc. Japan 3: 66-69 (June 1957). (2752)

Tests were run on flat cards and non-flat metallic wire cards to compare their ability to card man-made fibers. The metallic wire card had lower costs for installation, repairs, overhead, power, and consumption of raw material.

INCREASING THE OPENING POWER OF CARDS: A NEW TECHNIQUE. T. W. G. Ashdown and P. P. Townend (Univ. of Leeds). Textile Recorder 75: 54-57 (Sept. 1957). (2753)

While carrying out a program of research into the contribution of different densities of card clothing on the efficiency of carding, it was observed that the material carried by the last worker over a one-swift card was better carded than the material delivered by the doffer. On investigating the reason for this anomaly it became clear that the position of the fancy roller over the swift on a roller and clearer card is fundamentally wrong and the experiments described in this article were carried out to establish where this roller should be placed in order to gain the maximum carding efficiency from any swift on a woolen or worsted card. Diagrams. Photographs.

MECHANISM AND CALCULATION OF THE DRAFT, PRODUCTIVITY, AND COMBING EFFECT OF THE REVOLVING FLAT CARD. G. Schmalfuss. Spinner u. Weber 75, No. 4: 154-160 (1957). In German. Through BCIRA 37: 186 (1957). (2754)

It is shown that the quality of yarn is determined by the card and its mechanism. The latter is described in detail and illustrated by drawings. Examples are given for the most important calculations (draft between lap- and feed-roller, feed-roller and taker-in, taker-in and main cylinder, main-cylinder and doffer; productivity, in kg/hour; combing effect, expressed by the number of combings/inch).

DEVELOPMENT OF WOOL COMBING. PART 1. FROM HAND TO MACHINE METHODS. H. Lemon (Wool Industries Research Assoc.). Texture 4: 99-103 (Sept. 1957). (2755)

The history of wool combing is traced from its earliest beginnings to the middle of the nineteenth century. Diagrams. 13 references.

MODERN COMBERS AND COMBING PRACTICE. PART 2. SETTING AND WORKING THE PB25 SCHLUMBERGER COMBER. F. Gill. Textile & Cordage Quart. 7, No. 2: 74-78 (1957). (2756)

COILERS: HOW BIG CAN THEY GET? J. Boylston. Textile Age 21: 20 (Sept. 1957). (2757)

Discussion of what machinery and materials handling changes will be necessary before coilers can get larger.

DRAWING AND ROVING B 3

AUTOMATIC CONTROL OF THE THICKNESS OF SLIVER. M. Tabata and S. Ishikawa (Tokyo Inst. of Technology). J. Textile Machinery Soc. Japan 3: 32-37 (June 1957). (2758)

This paper is a theoretical study of how to regulate the draft ratio to secure uniformity of sliver drafted in a drawing or roving frame equipped with an automatic leveling device, like the Autoleveller made by Prince-Smith & Stells Ltd. Graphs. Diagrams. Formulas. 3 references.

STAPLE DIAGRAM AND ROLLER DRAFTING. A. Ikeda, R. Kinoshita and I. Okano (Tokyo Univ.). J. Textile Machinery Soc. Japan 3: 22-31 (June 1957). (2759)

In the drafting of sliver, it is necessary to know the staple length which represents the length of all fibers in the sliver, in order to fix a suitable roller setting. Several methods have been devised by experts to determine such staple length. The authors have developed a new method. It is based on a "representative staple length" theory derived from the drafting theory. This representative staple length has been used to analyze the staple diagram. Examples of evaluation of the staple diagram of several species of raw cotton by this method are given. Graphs. Formulas. Tables. 19 references.

MODERN WORSTED SPINNING PRACTICE. PART 5. CONE DRAWING. N. Roper. Textile Mfr. 83: 454-456, 474-475 (Sept. 1957). (2760)

Drafting arrangements on cone machines are similar to those on open machines but the bottom front rollers are usually small in diameter, enabling closer carrier settings to be made for the shorter materials. Anglo-Continental drawing, man-made fibers on the worsted system, drafting tension, and special problems are discussed.

FEATHERTOUCH DRAFTING SYSTEM. Ideal Industries Inc. Textile Bull. 83: 79-83 (Sept. 1957). (2761)

Drawing frame developments have quadrupled the operating speed of this equipment since 1948. This article tells of the improvements on changeovers and new frames which have made front roll speeds of 900 rpm both possible and practical. Photographs.

SPINNING, WINDING, TWISTING B 4

WATCH THOSE TOP ROLLS! R. Main. Textile Age 21: 10 (Sept. 1957). (2762)

Pointers for selection and maintenance of top rolls. Diagrams.

MINIMUM STAPLE FOR THE HIGHEST COUNT. J. Duerst. Textile Ind. 121: 124, 129 (Oct. 1957). (2763)

Formulas are developed for calculating the minimum cotton staples for the highest counts. Formulas. Table.

PNEUMATIC BROKEN-END COLLECTION. E. Jacobi. Textile Wkly. 57: 783-784 (Sept. 20, 1957); Textile Merc. 137: 471-472 (Sept. 20, 1957). (2764)

The Augusta, a new design of pneumatic broken-end collector introduced by the German firm of E. Jacobi, has a suction tube of patented "pear-drop" shape which easily allows the retention of the existing underclearer and its ready withdrawal for cleaning. The underclearer is held by a special spring. Features are described and illustrated with diagrams and photographs.

SPINNING WITHOUT FLYERS. W. Frenzel. Faserforsch. u. Textiltech. 8, No. 1: 1-9 (1957); Textil-Praxis 12, No. 2: 114-119 (1957). In German. Through BCIRA 37: 217 (1957). (2765)

The new spinning process described consists in imparting to the roving on the roving twister so many twists that it can no longer be drawn, untwisting the hard-twisted roving completely by the so-called "decordisator" fixed on the spinning machine, and feeding it as twistless sliver to the feed rollers of the vertical drafting system of the spinning machine. The process (patented by the author) simplifies the machinery, shortens the spinning, saves power and labor, and brings about an improvement in the yarn quality. 25 references.

YARNS B 5

YARNS FROM BLENDS WITH CAPRON STAPLE FIBERS. V. M. Rybakov and N. G. Rusakov. Tekstil. prom. 16, No. 10: 29-30 (1956). In Russian. Through BCIRA 37: 187 (1957). (2766)

Blends from 20, 30, 40, 60 and 80% Capron (polyamide) staple fiber and the corresponding amounts of cotton, and from 20 and 80% Capron and 80 and 20% viscose staple fibers showed the same spinning properties as pure viscose fibers. Improved yarn properties and high quality fabrics were obtained by using Capron fibers of 32 mm staple length in blends with cotton, and of 40 mm staple length in blends with viscose fiber. Best results were obtained with 30% of coarse (metric number 5000) Capron staple fiber in the blend.

REVIEW OF METALLIC YARNS. Textile Organon 28: 119-121 (Aug. 1957). (2767)

The six major producers of metallic yarns are listed, typical methods of producing foil-type metallics and metallized Mylar are outlined, and information on sizes, prices, and end-uses is given.

DEPENDENCE OF THE COHESIVE LENGTH UPON THE MOISTURE CONTENT IN THE FIBER. F. Maag. Melliand Textilber. 38, No. 2: 130-132 (1957). In German. Through BCIRA 37: 201 (1957). (2768)

The "cohesive length" (the term was chosen in analogy to breaking length of yarns, so as to be able to compare the cohesion forces of slivers with various counts) is shown to increase with increasing water content of the fibers. In the range of normal humidities, spun rayon fibers show negligible moisture variations of about 3%, while cotton exhibits, owing to hysteresis, cohesive-length differences of about 20%.

EFFECT OF YARN TWIST AND TWISTING TENSION ON THE USAGE VALUE OF RAYON TIRE CORD. W. Frenzel and W. Kittelmann. Faserforsch. u. Textiltech. 8, No. 1: 10-14 (1957). In German. Through BCIRA 37: 236 (1957). (2769)

The rayon cords tested were produced by a new laboratory twisting method by means of which it is possible to maintain constant working conditions and to eliminate vibration phenomena which affect the deviation range of the results. On examining the effect of twisting tension and twist on the physical and textile properties of the cord (in dry state) it was found that, whereas the preliminary and final twists considerably alter the static properties of the cord, tension differences during twisting greatly affect the deviation range of single test results.

POLYVINYL ALCOHOL FOLDED YARNS. G. Klust. Melliand Textilber. 38, No. 2: 134-136 (1957). In German. Through BCIRA 37: 203 (1957). (2770)

The properties of polyvinyl alcohol, filament and staple fiber, folded yarns are examined. They have a very high dry strength (superior to that of cotton yarns), which considerably decreases when the yarn is steeped in water. The loss in strength is rapid at first and, after a prolonged period (9 1/2-month test) remains constant. Knotting causes a loss in strength of more than 50%. The abrasion resistance of dry PVA-yarns is superior to that of cotton yarns; the resistance decreases in wet yarns. Wet PVA-yarns have a greater elongation than dry yarns, especially fiber yarns (as compared with filament yarns).

FABRIC PRODUCTION C

WARPING, SLASHING, YARN PREPARATION C 1

WARP-TYING MACHINE. Z. I. Labuzova. Tekstil. Prom. 16, No. 10: 38-40 (1956). In Russian. Through BCIRA 37: 190 (1957). (2771)

Constructional details and illustrations of this stationary machine for knotting the warp ends are given.

VACUUM-YARN BRAKES FOR DIFFERENT TYPES OF WARPING CREELS. A. J. Gasser. Melliand Textilber (English ed.) 38, No. 3: 182, 184 (1957). (2772)

Advantages of vacuum brakes are as follows: (1) yarn tension is very even, (2) warping speeds make very little difference, and (3) tension can be adjusted from a central position. Graphs. Diagrams. Photographs.

THREAD CUTTING DEVICE FOR WARPING CREELS. Melliand Textilber. (English ed.) 38, No. 3: 187 (1957). (2773)

CONVENTIONAL STARCH IN WARP SIZING. E. King and G. Wood. Textile Age 21: 42 (Sept. 1957). (2774)

Conventional starches are adapting to newer processes.

ELECTROMECHANICAL LIFTING OF THE CYLINDERS IN A SLASHER SIZER. J. P. Savary. Industrie Textile: 41-42 (Jan. 1957). In French. Through BCIRA 37: 189 (1957). (2775)

By controlling the pressure exerted on the warp by the squeezing rollers of the slasher sizer, it is possible to avoid parts of the warp being stripped of size if the machine works at low speed. For this purpose, it is sufficient to lift one of the two rollers on to a mobile support driven in a suitable manner. The arrangement and its mechanism are described.

WARP SIZING. PART 17. P. V. Seydel. Textile Ind. 121: 185-198 (Sept. 1957). (2776)

Discussion of methods for loading squeeze rolls, recently developed size boxes, and operation and care of slasher cylinders. Photographs. Diagrams.

WARP SIZING. PART 18. P. V. Seydel. Textile Ind. 121: 130-141 (Oct. 1957). (2777)

Discussion of antistick rolls, hoods, multicylinder slashers, hot-air dryers, cooling fans, measuring rolls, and split rods. Photographs. Diagrams.

THREAD GUIDES AND YARN TENSION DEVICES FOR WINDING MACHINES. E. Löhmer. Melliand Textilber. (English ed.) 38, No. 3: 178-180 (1957). (2778)

After a brief discussion of yarn tensioning by weights, the Universal yarn tension device (Maschinenfabrik Franz Müller) is described. No initial tension is required. It offers a straight yarn path with minimum tension and no unwanted additional tension on the yarn. Photographs. Diagrams. Graph.

WEAVING C 2

SPORT SHIRT MATERIAL IN THE FORM OF TUBULAR OR DOUBLE CLOTH. W. Görlach. Textil- u. Faserstofftech. 6, No. 12: 551-552 (1956). In German. Through BCIRA 37: 220 (1957). (2779)

Sport shirt materials are discussed in general and weaving techniques similar to those for the production of tubular and double fabrics are described in particular. Some examples of fabric settings are given.

MEASURING AND COUNTING DEVICES IN THE WEAVING MILL. E. O. Hesse. Spinner u. Weber 75, No. 21: 976-978; No. 22: 1020 (1956). Through BCIRA 37: 158 (1957). (2780)

Various constructions of weft counters, cloth length-measuring devices, and revolution counters are described and illustrated.

WEAVING FROM LARGE WEFT PACKAGES. PART 2. J. W. Pennington. Textile Recorder 75: 57-60 (Sept. 1957). (2781)

The passage of the shuttle through the shed, warp shed angles and size of shed, size of shed at front edge of shuttle, dobby shedding motions, the bottom shed line, and limitations of size of pirn or cop and shuttles are discussed. Diagrams. Tables. Graph.

PICKERS FOR OVERPICK LOOMS. Melliand Textilber. (English ed.) 38, No. 3: 187-188 (1957). (2782)

The Stirrup picker is designed so that friction and pressure in the spindle bore are reduced about 25%. Attachment to the picking strap is in line with the pulling force. Diagrams.

WHAT IS TUFTING? Textile & Cordage Quart. 7, No. 2: 93-96 (1957). (2783)

A brief explanation of the sequence of events in tufted carpet manufacture. Diagram. Photographs.

WEATHERPROOF FABRICS BY HIGH PICK LOOM ATTACHMENT. Textile Merc. 137: 475-479 (Sept. 20, 1957). (2784)

Service tests on fabrics produced with the Southern Regional Research Laboratory's high pick loom attachment are reported. Tables. Diagrams.

ADJUSTABLE HEDDLE FRAME. M. Paul. Melliand Textilber. (English ed.) 38, No. 3: 192-196 (1957). (2785)

A discussion of types of heddles and heddle frames and their functions and requirements.

ELECTRICAL LOOM-CONTROL GEAR AS A MEANS FOR THE AUTOMATIZATION OF WEAVING MILLS. W. Schirmeisen. Melliand Textilber. (English ed.) 38, No. 3: 188-192 (1957). (2786)

Electrical loom control devices are discussed briefly. Photographs.

NEW NORTHROP LOOM. Brit. Northrop Loom Co. Ltd. Textile Merc. 137: 345, 375 (Aug. 30, 1957). (2787)

Features of the new Universal Northrop model MRT topless high speed automatic loom for cotton, wool, and man-made fiber fabrics.

WEAVE COTTON GOODS 200% FASTER? Textile Ind. 121: 115-118 (Oct. 1957). (2788)

The new Tumack loom, built by James Mackie & Son Ltd, is reported to weave double cloth at 380 picks per minute in a 64-inch reed space. The picking mechanism of the Tumack loom is unique; filling is inserted by two spears which each insert two filling threads at a time in separate sheds, one above the other. Harnesses are divided into several sections, so that shedding takes place in a "rippling" motion across the loom, between the two spears. The selvage is formed by a short end of each pick, which is woven in after being cut by a special pin-cutter mechanism. Diagrams.

SETTING OF THE MECHANICAL LOOM. E. O. Hesse. Spinner u. Weber 75, No. 4: 164-165 (1957). In German. Through BCIRA 37: 190 (1957). (2789)

The device described and illustrated can be used in controlling the timing of the pick (determining the distance between the fell of the cloth and the reed at the start of picking), the position and height of the shed, the distance between heddle shaft and lay cap, the adjustment of the picker spindle, the distance of the picking shaft from the edge of the loom frame, the position of the lay, the height of the breast beam, the reed angle, the position and dimensions of the shuttle box, and the shuttle mass.

STUDY IN LOOM FIXING. PART 15. F. D. Herring. Textile Bull. 83: 87-88 (Sept. 1957). (2790)

Mispicks, rocker shaft bearings, boxing shuttle, thin places, filling fork grate, and the filling motion.

JUTE AND LINEN WEAVING. PART 3. CHAPTER 7. SIDE SELVAGES OR LISTS. W. Haggan. Textile & Cordage Quart. 7, No. 2: 90-92 (1957). (2791)

OPTIMUM ADJUSTMENT OF THE SHUTTLE MOVEMENT ON THE LOOM. H. Hollstein. Textil- u. Faserstofftech. 6, No. 12: 547-551 (1956). In German. Through BCIRA 37: 220 (1957). (2792)

The method described takes into account the technological and economic requirements, for which the following values must be determined: the highest permissible shuttle-speed to which a weft material can be subjected; the highest permissible acceleration and retardation of the shuttle with respect to flying off of the cops and wear of the picker; the positions of the crank for the initial and terminal shuttle motion. Methods for determining these values are discussed, and equations and diagrams are given.

KNITTING C 3

ALIGNMENT CHART FOR WARP KNITTING. J. B. Lancashire. Hosiery Trade J. 64: 70-71 (Sept. 1957). (2793)

An alignment chart is presented to save lengthy arithmetical calculations in warp knitting problems.

PROCESSING METALLIC YARNS. Man-Made Textiles 34: 56-57 (Sept. 1957). (2794)

Recommended mill practice in Lurex warp knitting, warp beam construction, and suggestions on the technique of knitting directly from bobbins.

UNCONVENTIONAL FABRIC-MAKING MACHINE. Ditta A. Caperdoni. Hosiery Times 30: 12-13 (Sept. 1957). (2795)

This Italian Waltex machine neither weaves nor knits in the conventional sense, but produces a new type of looped fabric which looks like knitted fabric but is much more stable. Features of the machine are described. Photographs. Diagrams.

NEW HIGH-SPEED FULL-FASHIONED KNITTING MACHINE. Melliand Textilber. (English ed.) 38, No. 3: 196, 198 (1957). (2796)

Features of the Schubert & Salzer type J2 machine are described.

NEW METHOD OF COLOR CHANGING. W. Shewmake. Textile Ind. 121: 171, 174 (Oct. 1957). (2797)

A new method of color changing provides additional versatility and accuracy, and increases the pattern scope on Banner SCP solid color knitting machines. Complete conversion to the new method of color changing can be accomplished in less than forty minutes. Diagram.

NEW 32" DIAMETER OUTERWEAR UNIT. J. B. Lancashire. Hosiery Trade J. 64: 74-77 (Sept. 1957). (2798)

The multi-feeder Bentley-Wildt model JTR is described and illustrated. Photographs.

LINKS-LINKS PATTERNED FOOTWEAR WITH A CUSHION SOLE. Wildt & Co. Ltd. Hosiery Trade J. 64: 60-62, 92 (Sept. 1957). (2799)

The Bentley-Wildt Autoswift model BTL is described and illustrated.

FABRICS C 4

SERVICEABILITY OF FABRICS. J. Jensen. Tidsskr. Textiltek. 15, No. 1: 9-13 (1957). In Danish. Through BCIRA 37: 171 (1957). (2800)

Wear tests, effect of finishing methods on wearing properties, effect of chemical composition of the fiber on the wearing properties of the fabric, and relationship between mechanical properties and wear values are discussed, with reference to the literature.

STREAKS ON VISCOSE/ACETATE FABRICS RESULTING FROM APPARENT PIGMENTATION DIFFERENCES IN THE DELUSTERED FIBERS. N. Iwanow and R. Schneider. Bull. Inst. Text. France No. 63: 7-13 (Oct. 1956). In French. Through BCIRA 37: 204 (1957). (2801)

Streaks in delustered acetate/viscose rayon fabric caused by accidental exposure to light during storage, were examined by the oil-immersion method, and it was found that these streaks were due to the titanium-dioxide particles being surrounded by modified (photo-oxidized) cellulose globules with a refractive index different from that of normal cellulose acetate. The greatest reduction of fiber strength was observed exactly in the places most exposed to light.

CLEANING OF SYNTHETIC FUR-PILE FABRICS. D. S. Lyle (National Inst. of Drycleaning). Am. Dyestuff Reptr. 46: P699-P705 (Sept. 23, 1957). (2802)

A survey of the drycleaning problems of fur-pile fabrics. The various types of fur-pile fabrics and their particular cleaning problems are discussed. Photographs.

WOVEN FABRIC STRUCTURE: SHEPHERD'S CHECK MODIFICATIONS. D. C. Snowden. Man-Made Textiles 34: 55 (Sept. 1957). (2803)

SPECIAL EFFECTS WITH LOOM REEDS. O. Hughes. Textile Ind. 121: 120-123 (Oct. 1957). (2804)

Many fabrics utilize special reeds, or variations in the drawing-in of the warp ends in the reed. Some fabrics use a special reed in combination with other loom attachments to produce desired weaves or effects. Special effects are discussed under the headings: variable denting, pattern reeds, Colonial bedspread, terry cloth, frieze, diagonal reeds, fan-shaped reeds, curved reeds, and double reeds. Photographs. Diagrams.

FABRIC TYPES AND CONSTRUCTIONS: COTTON FABRICS: TWILLS. W. Middlebrook. Textile Mfr. 83: 468-470, 473 (Sept. 1957). (2805)

Names, widths, ends and picks, and counts of a number of 3-end twills, 4-end twills, 2 x 2 twills and miscellaneous types, such as rice weaves, Albert diagonal, bullhide, whipcords, etc.

DESIGN IN WOVEN STRUCTURE. PART 58. "DIAMOND" PATTERNS. D. C. Snowden. Wool Rev. 31: 29-30 (Sept. 1957). (2806)

FLEECY NONWOVENS BY CHAIN STITCH TECHNIQUE. P. Abbenheim. Skinner's Silk & Rayon Record 31: 966-969 (Sept. 1957). (2807)

A new machine for nonwoven fabrics has been built in East Germany by VEB Tullmaschinenbau. It is a fiber sheet chain stitch sewing machine which makes thick, fleecy insulation materials. Cross-laid carded fleeces are stitched with rows of stitches at intervals of less than 1 cm. It is claimed that the material will not felt-up and that it can be washed and even boiled. Testing methods (and results) for determining the insulation capacity of these fabrics are described in detail. Photographs. Diagrams. Table. 2 references.

TECHNICAL DATA FOR FABRIC CONSTRUCTION. W. Tillmann. Melliand Textilber. 37, No. 11: 1287-1290 (1956). In German. Through BCIRA 37: 39 (1957). (2808)

The quantitative relationships between warp and weft, fabric density, yarn count, yarn strength, breaking length, degree of shrinkage, weight of warp and weft per sq. m. of cloth, fabric weight per sq. m., strength, and tear length of the fabric, etc., are discussed.

CLOTHING FABRICS: FACTS FOR CONSUMER EDUCATION. M. Smith. U. S. Dept. of Agriculture, Washington 25, D. C. Apr. 1957. 29 p. Home economics research report no. 1. Available from Superintendent of Documents, Washington 25, D. C. 25 cents. (2809)

Information for consumers is given on fabrics from natural and man-made fibers (including labeling); on fabric constructions for woven, knitted, and nonwoven fabrics; on woven, printed, embossed, and embroidered patterns; on colorfastness; and on special finishes. A glossary of staple fabrics is included. Photographs.

PILLING. J. Munksgaard. Tidsskr. Textiltek. 15, No. 1: 2-5 (1957). In Danish. Through BCIRA 37: 171 (1957). (2810)

Literature on the pilling problem and factors involved (fiber length, twist, denier, blend, textile assistants, weave, type of yarn, etc.) are reviewed and suggestions are made for preventing pill formation.

BACKING MATERIAL FOR CARPETS AND FABRICS. E. G. Poole and E. G. Cockburn. Textile Wkly. 57: 633-634 (Sept. 6, 1957). (2811)

A new and simplified method of making latex foam is described using a delayed-action gelling agent.

FINISHING AND CHEMICAL PROCESSING D

DYEING AND FINISHING MACHINERY: INFLUENCE ON MACHINE DESIGN OF FABRIC TENSION AND PRESSURE. Texture 4: 104-105 (Sept. 1957). (2812)

A general discussion of the problems involved in the control of fabric tension and pressure during finishing.

CHEMICAL PROCESSES D 1

ACTION OF HYPOCHLORITE ON COTTON: RAPID HIGH TEMPERATURE BLEACHING. Texture 4: 109-110 (Sept. 1957). (2813)

The work of the British Cotton Industry Research Association on rapid high temperature hypochlorite bleaching is described briefly. 3 references.

FULL-WIDTH WET TREATMENT OF FABRICS COMPOSED OF NATIVE AND REGENERATED CELLULOSE. Lindauer Dornier GmbH. Melliand Textilber. (English ed.) 38, No. 3: 216, 218 (1957). (2814)

The Dornier-Haubold range for full-width cellulosic fabric desizing, bleaching, and caustic steaming is described and illustrated. Diagram. Photographs.

DEVELOPMENT OF A NEW CONTINUOUS TWO-STAGE SYSTEM FOR FULL-WIDTH DESIZING, KIERBOILING AND BLEACHING. H. Pierling. Melliand Textilber. (English ed.) 38, No. 3: 198-206 (1957). (2815)

The installation is described and illustrated by flow sheets.

FINISHING OF JERSEY CLOTH FOR OUTERWEAR. H. Stosius. Melliand Textilber. (English ed.) 38, No. 3: 210, 212 (1957). (2816)

GERMANY'S TECHNIQUE OF PROOFING AGAINST WEATHER, WASHING, AND FLAMES. V. Bird. Fibres 18: 300-304 (Sept. 1957). (2817)

The German Aflamman-fast-finishes for permanent weather and washproof flameproof impregnation are described. Tables. Photographs. 4 references.

POLYETHYLENE FOR TEXTILE COATING. H. Anders. Spinner u. Weber 75, No. 4: 166 (1957). In German. Through BCIRA 37: 196 (1957). (2818)

The coating of linen, cotton, jute, silk, nylon and Perlon fabrics and felt with polyethylene paste (which can be mixed with dyes and pigments, if required) to render them waterproof, resistant to chemicals, seawater, etc., heat-insulating, etc. is described.

FLAMEPROOFING FINISHES. J. K. Skelly. Textile & Cordage Quart. 7, No. 2: 97-102 (1957). (2819)

A review with 14 references.

NEW ALL - PURPOSE HOSIERY MACHINE. Turbo Machine Co. Am. Textile Reptr. 71: 15, 44 (Sept. 12, 1957). (2820)

The Brewin machine introduces a new high temperature system of simultaneous dyeing and plasticizing of nylon hosiery, including a drying cycle to finish the stockings, ready for the pairer. Production of over 100 pairs per 8-hour shift is claimed. Photograph.

PERMANENT DESIGNING BY RESIN FINISHING. R. Günther. Z. ges. Textil-Industrie 59, No. 2: 55-57; No. 4: 126-128 (1957). In German. Through BCIRA 37: 229 (1957). (2821)

Machinery for pleating, embossing, and schreinering, and the characteristics of the treated fabrics are described and illustrated.

AFTERMERCERIZATION OF METHYLOLMELAMINE RESIN-TREATED COTTON FABRICS. L. W. Mazzeno, Jr., R. M. Reinhardt, A. R. Markezich and J. D. Reid (Southern Regional Research Lab.). Am. Dyestuff Reptr. 46: 719-724 (Oct. 7, 1957). (2822)

Aftermercerization of methylolmelamine-treated 80 x 80 print cloth improves the tearing strength of the fabric as much as 20%, and abrasion resistance up to 100%. Wrinkle-recovery angle is only slightly diminished by the treatment. Optimum conditions for this process are: resin content, 6-10%; alkali concentration, 20%; time of mercerization, 20 minutes; and temperature of mercerization, 25° C. Durability of the improvements imparted by the alkaline treatments has been shown by laundering through six standard cycles by the AATCC Method No. 14-53 modified to use 160° F as laundering temperature. A comparison of premercerized and aftermercerized, resin-treated fabrics shows that more benefit in strength properties is achieved with the aftermercerization process. Data are presented which qualitatively explain the action of the alkali on the resin-treated fabric. Graphs. Tables. 13 references.

DEVELOPMENT OF DETERGENTS FOR RAW WOOL SCOURING: A CONSERVATIVE APPROACH. F. F. Kobayashi (Lowell Technological Inst.). Am. Dyestuff Reptr. 46: 694-695 (Sept. 23, 1957). (2823)

The development of detergents for raw wool scouring through a cooperative program in which detergent manufacturer, cooperating mills, and Lowell Technological Institute participated.

PRACTICAL ASPECTS OF NEUTRAL GREASE WOOL SCOURING. E. J. McNamara, Jr. (Rohm & Haas Co.). Am. Dyestuff Reptr. 46: 731-736 (Oct. 7, 1957). (2824)

The author discusses the technology of wool scouring and gives diagrams showing the various systems in operation. He traces the development of neutral wool scouring, which has become so popular in the last year. The qualities of nonionic synthetic detergents are emphasized and the effect of the chemical constitution of these materials in neutral scouring is explained. The paper is written from the point of view of the practical wool scourer and covers information concerning various types of recovery systems and the qualities of the resultant grease obtained. Diagrams. 8 references.

CHEMICAL SHRINKAGE OF FABRICS. F. Hagen. Melliand Textilber. (English ed.) 38, No. 3: 212, 214 (1957). (2825)

Reference is made to processes for resin deposition and to the equipment (particularly dryers) required. Diagram. Photograph.

DYEING AND PRINTING D 2

DYEING OF HYDROPHOBIC FIBERS. PART 1. EFFECT OF ACIDS AND SWELLING AGENTS ON THE DYEING OF ORLON 42 WITH AN ANIONIC AZO DYE. J. H. Skinkle and A. A. Denio (Lowell Technological Inst.). Am. Dyestuff Reptr. 46: P706-P708 (Sept. 23, 1957). (2826)

A study was made using equimolar concentrations of four common acids: hydrochloric, sulfuric, formic, and acetic. It was found that the lower the pH of the bath, the higher the percent exhaustion. Also, the exhaustion in the formic acid bath was relatively high, considering that it had a pH of only three. Thus, formic acid is recommended for blends containing cellulose fibers. The use of certain swelling agents to increase the rate of dyeing was studied. Ammonium thiocyanate, urea, and acetamide proved successful in increasing the exhaustion in an acid dyebath, although these compounds alone had no appreciable effect.

LEVEL DYEING OF BARRY POLYAMIDE FIBER FABRICS: A NEW APPROACH. H. Egli (Sandoz Ltd). Melliand Textilber. (English ed.) 38, No. 3: 208, 210 (1957). (2827)

Methods for level dyeing of polyamide fabrics are summarized and a new method developed in the Sandoz laboratories is described. Dyeing is carried out in the presence of Resolin NCP or Lyogen P. Tables. 6 references.

STOCK, YARN, AND PIECE-DYEING METHODS FOR CARPETING OF 100% DU PONT NYLON. E.I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Aug. 1957. 3 p. Bull. N-101 (replaces Bull. N-29, N-52, N-53, N-78). (2828)

USE OF CARRIERS IN DYEING TRIACETATE. J. D. Ratcliffe (Brit. Celanese Ltd). Man-Made Textiles 34: 61-62 (Sept. 1957). (2829)

A practical appraisal of different types.

ACRYLICS AND THEIR DYEING. J. Corbiere. Teintex 22, No. 1: 17-32 (1957). In French. Through BCIRA 37: 226 (1957). (2830)

The main acrylic textiles (country of origin, producers, types) are reviewed and the treatments to which they can be subjected (sizing, thermal treatment, bleaching, dyeing, and finishing) are described, with special reference to dyeing of the French polyacrylonitrile fiber Crylor and its blends with wool, nylon, cellulose triacetate, cellulose acetate, viscose, or cotton. 20 references.

SYNTHETIC FIBER BLENDS AND METHODS FOR DYEING THEM. W. Hees. Melliand Textilber. 38, No. 1: 68-71; No. 2: 167-171; No. 3: 304-310 (1957). In German. Through BCIRA 37: 195 (1957). (2831)

The most important fiber blends (binary and ternary mixtures), and their behavior during dyeing are discussed and dyeing methods for blends are reviewed.

IDENTIFICATION OF DYES. G. B. Chabot, Sr. and M. J. Babey. American Cyanamid Co., Dyes Dept., Bound Brook, N.J. 17 p. Dyes tech. bull. no. 846. Free. (2832)

As a result of the need for a positive and rapid method of identifying dyes, many separate systems of identification have been established. The method of identification established by American Cyanamid Company which is used daily in its Dye Identification Laboratory is described. Photographs (some colored). 9 references.

CIBACRON DYES. Ciba Rev. No. 120: 2-32 (June 1957). (2833)

Cibacron dyes give brilliant shades whose exceptional fastness is owed to direct chemical linkage with the cellulosic fiber. Various aspects of their properties and uses are covered under the following headings: introduction, on dyestuffs with reactive groups forming a stable chemical linkage with textile fibers, application in piece dyeing, stripping, fastness properties, Cibacron dyes on the various types of cellulosic fiber, printing, and the "Cibacron test." Fabric swatches.

HYDROGEN PEROXIDE FOR OXIDIZING VATS. Becco Chemical Division. Textile Ind. 121: 104-108 (Oct. 1957). (2834)

This article describes the procedures for oxidizing vats on continuous ranges, jigs, and package machines; and the equipment used. Case history reports are given of the use of hydrogen peroxide at American Finishing Co., Memphis, Tenn., and at Ahern Textile Print, Inc., Norwich, Conn.

EXPERIENCE GAINED IN CONTINUOUS DYEING OF PIECE GOODS FROM CELLULOSIC FIBERS. C. Smith. Industrie Textile: 823-826 (Nov. 1956); 909-913 (Dec. 1956); 67-71 (Jan. 1957). In French. Through BCIRA 37: 193 (1957). (2835)

In this review, the author discusses, with special reference to the pad-steam process, the methods of preparing the piece goods, application of sulfur and substantive dyes (or direct dyes for cotton), and after-treatment of the dyed pieces.

BUFFERS IN THE DEVELOPING BATHS IN NAPHTHOL AS DYEING. P. H. Gross. Revue Textilis 13, No. 1: 17-21, 33 (1957). In French. Through BCIRA 37: 161 (1957). (2836)

Various buffer systems are reviewed, with special reference to the advantages offered by the mixture of mono- and disodium phosphates.

NEUTRAL-DYEING PRE-METALLIZED DYES: SIGNIFICANCE IN THE SEARCH FOR NEW TYPES OF DYE. Texture 4: 106-107 (Sept. 1957). (2837)

The successful dyeing of wool and nylon with dye-metal complexes under neutral conditions has suggested new areas of investigation in the search for new types of dyes.

MACROMOLECULES AND DYES IN SOLUTION. G. Centola. Bull. Inst. Text. France No. 63: 45-66 (Oct. 1956). In French. Through BCIRA 37: 193 (1957). (2838)

Study of the interaction between dyes and macromolecules in solution confirmed that (a) the macromolecules of substantive dyes combine with the molecules of hydroxylated polymers; (b) the co-ordination complex is formed by hydrogen linkages between the $-NH_2$ or -OH groups of the dye molecule and the -OH groups of the polymer; (c) the ionized SO_3- groups of the dye molecule cause an increased hydration of the macromolecule and, in certain cases, are responsible for the increase of intermolecular attraction forces. In cellulose, the increase hydration is associated with increased stability of the cellulose dispersed in a sol state and with increased tendency to cleavage of the cellulosic lamellae.

SAMPLE DYEING MACHINE. J. Cegarra Sanchez. Ingenieria Textil 23, No. 123: 504-512 (Nov.-Dec. 1956). In Spanish. Through BCIRA 37: 225 (1957). (2839)

The sample-dyeing machine described operates with automatic temperature control and agitation, and at a constant dye-bath volume (in contrast to the I. C. I. (Marney) dyeing machine, where the dye-bath volume is variable). The results obtained are completely reproducible and streaky effects due to faulty agitation are eliminated.

PAD-DYEING. A. Victor. Teintex 22, No. 1: 35-43 (1957). In French. Through BCIRA 37: 225 (1957). (2840)

Types of padding machines (4-roller, 2 horizontal rollers, 3 rollers arranged in a triangle, 2 vertical rollers) are described, with reference to dyeing with direct, substantive, and vat dyes.

EMULSION PRINTING ACCORDING TO THE LUPRINTOL K METHOD. A NEW PRINTING TECHNIQUE. E. Pochert. Melliand Textilber. 38, No. 2: 177-180 (1957). In German. Through BCIRA 37: 195 (1957). (2841)

This new printing method with vat dyes (patent applied for by Saica, Milan) differs from the conventional techniques in that the usual natural or synthetic thickening agents are replaced by stable water-in-oil type emulsions which impart the required viscosity to the printing pastes. The advantages of the new process are enumerated and a list of suitable vat (Indanthrene) dyes is given.

HISTORY OF COTTON PRINTING. PART 2. MORE EARLY LANCASHIRE PRINT WORKS: BIRKACRE. S. H. Pavière. Texture 4: 126-129 (Sept. 1957). (2842)

PRINTING POLYESTER FABRICS. R. Zeidler. Z. ges. Textil-Ind. 59, No. 1: 23-26; No. 3: 93-97 (1957). In German. Through BCIRA 37: 196 (1957). (2843)

Problems involved in printing polyester fabrics are discussed, with special reference to the increase of the diffusion rate during fixing of the dye by (a) increasing the hydrophilic nature of the fiber; (b) loosening of the fiber surface; (c) selection of suitable ester-soluble dyes with small molecular dimensions; (d) increasing the kinetic energy of the dyes during fixing. Combined printing and fixing methods (preparation of the fabric, printing, aftertreatment) are reviewed and their application in discharge-printing of polyester fabrics is outlined.

SCREEN PRINTING STENCILS FROM NYLON GAUZE. R. Künzl. Textil-Praxis 11, No. 11: 1115-1117 (1956). In German. Through BCIRA 37: 44 (1957). (2844)

The preparation of nylon gauze stencils is described.

NEW METHOD OF STRIPPING DISPERSE DYESTUFFS FROM POLYESTER FIBER FABRICS. G. Dürig and H. Stern (Ciba Ltd). Melliand Textilber. (English ed.) 38, No. 3: 206, 208 (1957). (2845)

MECHANICAL PROCESSES D 3

A MODERN "LONDON-SHRUNK" PROCESS. Drabert Söhne. Melliand Textilber. (English ed.) 38, No. 3: 226, 228 (1957). (2846)

The Kettling & Braun London-shrunk shrinking machine is described. Figures are given on shrinkage of a tubular jersey fabric.

HEAT STRETCHING CONTINUOUS FILAMENT AND STAPLE NYLON CORDS. British Nylon Spinners Ltd. Textile Merc. 137: 438-445 (Sept. 13, 1957). (2847)

This report has been formulated from results of experiments carried out by the Textile Development Department of British Nylon Spinners Ltd. to determine the physical effects of heat stretching nylon cords and discusses the three main variables associated with heat stretching: (1) the temperature of heating, (2) the time of heating, and (3) the tension applied during heating.

DRYING D 4

HEAT-SETTING FABRICS WOVEN FROM ENKALON AND TERLENKA YARNS. J. Andriessen. Enka Breda Rayon Rev. 11: 73-90 (July 1957). (2848)

Heat-setting of Enkalon and Terlenka fabrics is discussed under the headings: what is heat-setting?, model experiments with Enkalon yarns, heat-setting methods for woven fabrics, Enkalon woven fabrics on the tenter, properties of heat-set cloth, treatment of special kinds of cloth, behavior of Terlenka woven cloth, and influence of heat-setting on the dye absorption of Terlenka. Graphs. Tables. Photographs. 10 references.

DRYING PLANT DEVELOPMENTS IN GERMANY. Textile Wkly. 57: 657-659 (Sept. 6, 1957). (2849)

Textile drying developments in Germany are reviewed under the headings: changes in design, cylinder suction dryer, loop dryer, trends in heating media, and waste heat recovery. Diagrams.

MODERN FABRIC DRYING. W. Engel. Spinner u. Weber 75, No. 24: 1148 (1956). In English. Through BCIRA 37: 196 (1957). (2850)

Construction, mechanism and the air-duct system of a new multiple-stage frame with air-jet drying device are described and illustrated.

TESTING AND MEASUREMENT E

NEW MEASURING INSTRUMENTS FOR THE TEXTILE INDUSTRY. W. Dippel. Melliand Textilber. (English ed.) 38, No. 3: 220-226 (1957). (2851)

Psychrometers, drying control instruments, surface thermometers for rotating cylinders, and hot water heater control systems are described. Diagrams. Photographs.

FIBERS E 1

DIRECT OPTICAL METHODS OF FIBER IDENTIFICATION AND BRUSH-KNOT COMPOSITION DETERMINATION. E. F. Fullam and D. S. Hallgren. ASTM Bull. No. 224: 51-54 (Sept. 1957). (2852)

Two simple methods are proposed for an accurate quantitative determination of the horse hair and hog bristle composition of a paint brush-knot. Photomicrographs. 6 references.

QUANTITATIVE DETERMINATION OF WOOL AND CHEMICAL FIBERS ON CELLULOSE BASIS. (RAYON AND CUPRAMMONIUM FIBER.) M. Kehren and R. Jansen. Spinner u. Weber 74, No. 8: 344-347; No. 9: 383-384; Nos. 10-11: 465-468; No. 19: 880-882; No. 21: 980-984 (1956). In German. Through BCIRA 37: 139 (1957). (2853)

A detailed description is given of extensive experiments, carried out by German and foreign workers. A method for the separation of wool and rayon (modified potassium hydroxide method) is recommended in preference to the sulfuric acid method and its modified version. 76 references.

FIBER REPLICATION FOR LIGHT MICROSCOPY. V. Peck (Tennessee Eastman Co.). (Letter to the editor). Textile Research J. 27: 751-752 (Sept. 1957). (2854)

ALUMINUM REPLICAS OF FIBER SURFACES FOR LIGHT MICROSCOPY. A. W. Ferguson and R. G. Scott (E. I. du Pont de Nemours and Co., Inc.). (Letter to the editor). Textile Research J. 27: 752-753 (Sept. 1957). (2855)

CONTRIBUTION TO THE STUDY OF COTTON MATURITY BY TREBLE DIFFERENTIAL DYEING AND THE USE OF THE MICRONAIRE. L. J. Rony. Bull. Inst. Text. France No. 63: 15-44 (Oct. 1956). In French. Through BCIRA 37: 201 (1957). (2856)

Methods for determining cotton maturity are reviewed and it is shown that it is possible to use the method of differential dyeing for determining the dyeing affinity, as well as maturity of cotton fibers, by applying three differential dyeings differing in the ratio of the green and red dye concentrations. The cumulative frequency curve obtained for the weight/length unit of the fibers gives better indications as regards the number of fine fibers and their distribution than the usual methods for determining maturity. 21 references.

IMPORTANCE OF PRESSLEY STRENGTH INDEX AS A MEASURE OF TENSILE STRENGTH OF COTTON FIBERS. H. Navkal and S. Rajaraman (Technological Laboratory, Matunga). Indian Cotton Growing Rev. 11: 117-120 (Apr. 1957). (2857)

Twenty-eight Indian cottons were tested for intrinsic strength, Pressley strength index, and other important fiber properties. It was concluded that the Pressley strength index could replace other measures of tensile strength. Tables. 15 references.

HONEYDEW NUMBER OF INDIAN COTTONS. K. S. Bhujang (Indian Central Cotton Committee Technological Laboratory). Indian Cotton Growing Rev. 11: 126-127 (Apr. 1957). (2858)

In order to see whether the Indian cottons were contaminated with honeydew, quantitative estimation of sugar content by volumetric method was done for 10 Indian cottons. No positive evidence of honeydew was found. Tables. 4 references.

QUANTITATIVE ANALYSIS OF MIXTURES OF TEXTILE FIBERS. A. Darbon and J. Jacquemart. Bull. Inst. Text. France No. 63: 97-104 (1956). In French. Through BCIRA 37: 201 (1957). (2859)

The method described consists in microscopical examination of cross-sections or longitudinal sections of a given sample. It can also be applied to fibers with non-circular cross-section and to very small samples embedded in collodion, making it possible to determine, simultaneously, the number of fibers in the yarn cross-section, the nature and fineness of each component, and the quantitative distribution of various constituents.

YARNS E 2

METHOD FOR DETERMINING THICK PLACES IN YARN. W. Wegener and H. Meister. Melliand Textilber. 38, No. 2: 132-134 (1957). In German. Through BCIRA 37: 203 (1957). (2860)

The method described makes it possible (1) to scan the yarn point by point; (2) to detect all yarn places which are 100, 150, and 200% thicker than the required yarn diameter; (3) to record diagrams from which the short-period thickenings (neps) can be separated from the long-length thickenings (beads); (4) to shorten the time for counting by using an electronic evaluation device. The apparatus described was developed by the Institute of Textile Technology at the Technical College in Aachen.

NEW EVENNESS EVALUATION METHOD ON AN AIR MICROMETER PRINCIPLE. K. Kobayashi and A. Kurabayashi (Kosth Sokuteiki Co., Ltd). J. Textile Machinery Soc. Japan 3: 38-42 (June 1957). (2861)

The authors have developed a U% integrator for analyzing yarn unevenness. After an explanation of the principle of evenness evaluation based upon the air micrometer, they describe the features and theory of the evenness percentage integrator and give some examples of actual measurements. Diagrams. Graphs. Photographs.

UNEVENNESS STANDARDS FOR COTTON SPINNING. Zellweger AG (Uster, Switzerland). Verlag Melliand Textilberichte, Heidelberg, Germany, 1957. 31 p. In German. (2862)

Contains a recommended quality control program showing number of tests and type of evenness value required; standards for "even," "average," and "uneven" stock, typical evenness charts, and sensitivities and standards for evaluating slubbiness and neppiness of yarns. Tables. Graphs. Charts.

COMPARISON OF TWO METHODS FOR DETERMINING THE TWIST OF A COTTON YARN. G. de Backer. Revue Textilis 13, No. 1: 14-16 (1957). In French. Summary in BCIRA 37: 170 (1957). (2863)

The method of twisting and untwisting is compared with the direct twist determination on short lengths, pointing out the advantages and disadvantages of both methods. The method adopted by the author, the so-called "counter-proof" method, is described in detail.

DESIGN OF A LUSTER-METER FOR QUALITY CONTROL. T. M. Smith and H. A. Thompson (Tennessee Eastman Co.) and W. I. Kaye (Beckman Instruments, Inc.). Am. Dyestuff Reptr. 46: 725-730 (Oct. 7, 1957). (2864)

This paper describes the design of an electronic device for measuring the comparative luster values of yarns. The instrument monitors the difference in reflectance between a magnesium oxide reference sample and a yarn sample at the angle of specular reflection 45° to the normal to the plane of the yarn. This is accomplished by means of a regulated incandescent light source, a collimating system without lenses, a light modulator consisting of a synchronous motor and rotating sector, a vacuum type phototube, amplifier, detector, and meter. The meter automatically responds to the differences between the reflected intensities of the yarn and reference samples. Details of design and construction of the instrument, along with studies of the following, are included: luster vs. percent ash; luster vs. twist; luster vs. percent lubricant; luster vs. winding tension; and luster distribution. Diagrams. Graphs. Tables. 9 references.

FABRICS E 3

STANDARD REFERENCE FABRICS FOR SOIL BURIAL AND WEATHERING TESTS. S. Shapiro (Corps of Engineers, US Army). (Letter to the editor). Textile Research J. 27: 753 (Sept. 1957). (2865)

TEST RESULTS AND THEORETICAL CONSIDERATIONS CONCERNING THE HEAT TRANSMISSION OF FABRICS FROM NATURAL AND SYNTHETIC FIBERS. H. Reifferscheid. Melliand Textilber. 38, No. 2: 189-191 (1957). In German. Through BCIRA 37: 204 (1957). (2866)

With reference to the "Frigorimeter" for testing the heat-retaining properties of textiles, the author explains the results obtained with this device for wool, Perlon, and nylon (represented in diagrams) and discusses the theory underlying the processes of heat transfer from the heated sphere through the textile material to the surrounding air, the insulating value of a textile material, and the effect of fabric structure on the heat conductivity.

METHOD FOR STUDYING THE DEFORMATION OF FABRICS IN CREASING. R. Steele (Rohm and Haas Co.). Textile Research J. 27: 695-700 (Sept. 1957). (2867)

By a relatively simple arrangement the Instron tester may be converted to a compression tester with which increasing load-deformation curves for fabrics can be obtained. Such curves describe the low-radius bending behavior of a fabric rather completely and are related to its stiffness, resilience, crease recovery, and other properties involved in its drape and handle. Diagram. Graphs. 7 references.

LIGHTFASTNESS TESTER TYPE SUNTEST R-1041. Melliand Textilber 38, No. 2: 188-189 (1957). In German. Through BCIRA 37: 205 (1957). (2868)

The tester described has been developed as a laboratory device for determining the lightfastness of dyes and photochemical changes in samples. Comparative exposure tests between the Suntest device and the Fadeometer show no detectable differences in the results. The device is cheaper than the Fadeometer, but requires slightly longer exposure times.

RELATIONSHIP BETWEEN STANDARD REFERENCE SHADES AND THE FASTNESS EVALUATION OF DYED OR PRINTED TEXTILES. P. Rabe and O. Koch. Melliand Textilber. 38, No. 2: 173-177 (1957). In German. Through BCIRA 37: 205 (1957). (2869)

Since the results of fastness determinations of dyed or printed textiles depend to a great extent upon the depth of color, the tests are usually carried out at depths corresponding to standard reference shades. In order to be able to reproduce the dyeings accurately, a formula was developed, by means of which it is possible to calculate the depth as a function of saturation and intensity according to the specifications of the DIN color chart.

A RAPID TEST FOR DETERMINING THE SETTING EFFECT IN WARP-KNITTED POLYAMIDE FABRICS. G. Heine. Textil- u. Faserstofftech. 6, No. 12: 557-558 (1956). In German. Through BCIRA 37: 237 (1957). (2870)

The test described permits rough evaluation of (heat) setting in knitted polyamide fabrics without the use of an apparatus. In a sample of a given size, incisions are made at various distances, and the degree of curling of the strips is taken as a measure of the setting attained.

PHOTOELECTRIC COLORIMETER: SPECTRAL X. J. Duchemin. Industrie Textile: 65-66 (Jan. 1957). In French. Through BCIRA 37: 205 (1957). (2871)

Description and illustrations are given of the photoelectric colorimeter Electro-Synthise (Spectral X), which measures accurately the diffuse reflection from fabric surfaces. Auxiliary devices: a brilliancy tester, and additional devices for colorimetric testing of solutions and for nephelometric measurements, are also described and uses of the colorimeter in comparing samples, testing the ageing of textiles, and controlling detergent power are briefly outlined.

EXPERIENCES IN CREASE RESISTANCE TESTING OF FABRICS. B. Sziraki. Textil- u. Faserstofftech. 6, No. 12: 533-538 (1956). In German. Through BCIRA 37: 237 (1957). (2872)

The existing devices and methods for testing the bending elasticity and crease recovery of fabrics are described and the results compared, with special reference to the creasing properties of some characteristic fabrics from wool, rayon staple, and synthetic fiber blends. 22 references.

OTHER E 4

RESIN IDENTIFICATION IN TEXTILES. Texture 4: 107-109 (Sept. 1957). (2873)

Two rapid and simple tests are described which make use of resin hydrolysis. Tables. 4 references.

INDUSTRIAL ENGINEERING F

WHY WAIT FOR AUTOMATION? W. R. Green (Rapids-Standard Co., Inc.). Am. Textile Reptr. 71: 13, 121-123 (Sept. 19, 1957). (2874)

The author states that automation is nothing more than accelerated technological progress in the four areas of computing machines, tools, materials handling equipment, and control. He comments on possibilities for progress in each of these areas.

MACHINERY AND MAINTENANCE F 1

LUBRICATION IS MANAGEMENT'S BUSINESS. L. E. Endsley, Jr. (Texas Co.). Textile Ind. 121: 106-110 (Aug. 1957); 170-177 (Sept. 1957). (2875)

Part 1 discusses what management can expect from a good lubrication program, steps to take to insure obtaining maximum benefits from such a program, and suggestions regarding purchase of lubricant dispensing equipment. Part 2 discusses textile lubricants, general problems, and special lubricant requirements for spinning frames, looms, finishing machinery, and knitting machinery. A chart presents a summary of important lubricant characteristics required by textile machinery. Photographs. Reprints of the entire paper from which the text of this article was extracted are available from The Texas Co., 135 East 42 Street, New York, N.Y.

TRAVELING BLOWER CLEANER SYSTEMS IN SPINNING MILLS. Melliand Textilber. (English ed.) 38, No. 3: 176, 178 (1957). (2876)

NOISE ABATEMENT. PART 2. MEASUREMENTS AND MEASURES TAKEN IN AN UPTWISTING DEPARTMENT. H. Wormsbecher and H. B. Heijink. Enka Breda Rayon Rev. 11: 91-98 (July 1957). (2877)

Sources of noise in the uptwisting section (14 uptwisters) of an experimental department were studied. Machinery adjustments appreciably lowered the noise level. Driving belts were found responsible for a large portion of the noise.

AKULON IN THE TEXTILE INDUSTRY. PART 3. J. Siebrand. Enka Breda Rayon Rev. 11: 101-108 (July 1957). (2878)

Injection molding of Akulon and the use and advantages of molded articles in the textile industry are discussed. Diagrams. Photographs.

MACHINERY AND EQUIPMENT REVIEW. Textile Recorder 75: 65-126 (Sept. 1957). (2879)

Progress in cotton spinning machinery, by F. Charnley, p. 65-68; Modern winding and warping machinery, by D. Brunschweiler, p. 68-69; Efficiency in weaving, by E. Cotterill, p. 72-74; Carpet machine developments, p. 82-83; Recent trends in warp knitting machinery, p. 87; Developments in weft knitting machinery, by J. B. Lancashire, p. 88-89; Dyeing and finishing machine developments, by J. A. Somers, p. 98-99, 124; British textile machinery at Helsinki, p. 108-111.

RADICAL NEW CONCEPT IN TEXTILE AIR CONDITIONING. E. C. Hungate (Carrier Corp.). Am. Textile Reptr. 71: 10, 23-29 (Sept. 19, 1957). (2880)

Details are given of the new Carrier "spin dry" rotaspray system which incorporates high velocity, small size, and a self-cleaning characteristic which are claimed to meet the problems of space, installation, maintenance, and performance more effectively than previous systems. Photographs. Diagrams.

AUTOMATION IN RAYON AND SILK WEAVING. A. Gasser. Melliand Textilber. 38, No. 2: 140-141 (1957). In German. Through BCIRA 37: 211 (1957). (2881)

On the basis of the MTM (methods-time-measurement) system, costs are calculated for various manipulations during weaving (filling and changing of shuttles, inserting of bobbins, etc.) as compared with those for automatic shuttle- and bobbin-changing looms, the greatest savings being effected with automatic bobbin-changing devices.

INVENTORY MANAGEMENT OF SLOW-MOVING PARTS. A. C. Heyvaert and A. Hurt. Operations Research 4, No. 5: 572-580 (1956). Through BCIRA 37: 179 (1957). (2882)

A simple, fast, and accurate method for determining optimum stock levels for parts which are not in great demand is presented.

FUNDAMENTALS OF VARIABLE SPEED DRIVE CONTROL. L. Walter. Textile Mfr. 83: 471-473 (Sept. 1957). (2883)

SCIENCES G

CHEMISTRY G 1

CHEMICAL MECHANISM OF PERMANENT SET. R. S. Asquith, J. B. Speakman and E. Tolgyesi (Leeds Univ.). (Letter to the editor). Nature 180: 502 (Sept. 7, 1957). (2884)

It has been found that the lysine side-chains play little, if any, part in the setting of strained fibers in a boiling solution of sodium bisulfite. The rebuilding of disulfide bonds is the main cross-linking reaction. 3 references.

PROBLEM OF MOLECULAR WEIGHT DETERMINATION IN HIGH POLYMERS. K. Edelmann. Faserforsch. u. Textiltech. 8, No. 1: 30-32 (1957). In German. Through BCIRA 37: 240 (1957). (2885)

The reasons for obtaining different results from different methods of molecular weight determinations (number average and weight average) are discussed, with reference to the literature.

CHEMICAL AND PHYSICAL ASPECTS OF POLYESTER RESIN TECHNOLOGY. B. T. Hayes, W. J. Read and L. H. Vaughan (Bakelite Ltd). Chemistry & Industry No. 35: 1162-1170 (Aug. 31, 1957). (2886)

Recent developments, principles of manufacture, structure of cured polyester resin, and heat-resistant resin are discussed. Graphs. Tables. Photographs. 9 references.

INTERFACE BEHAVIOR OF CARBOXYMETHYLCELLULOSE ON TEXTILE FIBERS. J. Stawitz, W. Klaus and H. Krämer. Kolloid Z. 150, No. 1: 39-44 (1957). In German. Summary in BCIRA 37: 172 (1957). (2887)

Studies on the adsorption and migration of clear, radioactive carboxymethylcellulose solutions (with a specific activity of 0.075 mC/g.) from aqueous solution on textile fibers, especially cotton, indicated no adsorption but intensive migration of the CMC to the surface of the fiber layer. The fact that about 10γ CMC per 1 g. cotton is not removable by repeated rinsing is attributed to occlusion. The same results were obtained on acetate rayon, Perlon, and wool.

PHYSICS G 2

APPLICATION OF NUCLEAR PHYSICS IN THE TEXTILE INDUSTRY. J. Juilfs. Melliand Textilber. (English ed.) 38, No. 3: 172-176 (1957). (2888)

The possibilities for the application of nuclear physical testing and measuring methods in the textile industry are surveyed. 9 references.

MISCELLANY H

IDEA, INVENTION, INDUSTRIAL PROGRESS. J. T. Marsh. J. Textile Inst. 48: P370-P388 (June 1957). (2889)

Mather lecture. The commercial realization of ideas and inventions is discussed. The development of crease-resisting processes over the past thirty years is followed as a specific example.

TEXTILE WORLD 1957-1958 FACT FILE. Textile World 107, No. 7M: 1-342 (Mid-July 1956). (2890)

Mill reference data and a buyers guide are included in this annual fact file. Reference material in the 1956-1957 fact file has not been repeated. Both issues should be used together and both are indexed in the 1957-1958 issue.

BOOKS ABOUT TEXTILES: A CLASSIFIED LIST OF RECENTLY PUBLISHED WORKS. A. F. Kertess. Dyer 118: 113-115 (July 19, 1957). (2891)

TEXTILE TERMS AND DEFINITIONS. Textile Institute, 10 Blackfriars Street, Manchester 3, England. 3d ed. Feb. 1957. 112 p. (2892)

The second edition has been enlarged to about 1,000 terms and includes illustrated definitions of some fancy yarns and bulked yarns, as well as weave diagrams and sectional details of a number of the more complicated fabrics.

SCIENTIST IN THE TEXTILE INDUSTRY. H. W. Partridge. J. Textile Inst. 48: P321-P325 (May 1957). (2893)

The role and function of the scientist in the textile industry are considered and illustrated with examples of technological developments.

PROGRESS OF THE SYNTHETIC FIBER INDUSTRY IN JAPAN. M. Imoto (Osaka Univ.). J. Textile Machinery Soc. Japan 3: 1-8 (June 1957). (2894)

REPORT OF THE DIRECTOR OF RESEARCH FOR 1956-57. Wool Industries Research Assoc., Torridon, Headingley, Leeds 6, England. 1957. 32 p. WIRA pub. no. 206. (2895)

TECHNICAL REPORT ON THE HANOVER FAIR, 1957. Z. ges. Textil-Ind. 59, No. 13: 511-570 (1957). In German. Through BCIRA 37: 531 (1957). (2896)

The exhibits at the Hanover Fair, 1957, including machines for spinning (preparatory machines and accessories); preparatory weaving (knitting and hosiery) and weaving; weaving accessories; finishing and drying; general machinery and equipment as well as testing devices are reviewed. The descriptions are given in German, English, and French.

PATENT CHECKLIST

U.S. patents may be obtained from the U.S. Patent Office, Washington, 25, D.C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

YARN PRODUCTION B

CONVERTING A BUNDLE OF STAPLE FIBERS INTO SLIVER FORM. I. F. Stewart (to Imperial Chem. Industries Ltd). BP 769 598, Mar. 13, 1957. Through BCIRA 37: 187 (1957). (2897)

The bundles of staple fibers are fed across a series of circular, coaxial, combing discs that rotate at different speeds.

APPARATUS FOR THERMALLY PROCESSING THERMOPLASTIC YARNS. N. J. Stoddard and W. A. Seem (to Universal Winding Co.). USP 2 803 105, Aug. 20, 1957. (2898)

CRIMPED ACRYLONITRILE COPOLYMER FIBERS. J. W. Bolmeyer and J. A. Newnam (to E. I. du Pont de Nemours & Co.). USP 2 805 464, Sept. 10, 1957. (2899)

Permanently crimped acrylonitrile copolymer fibers (e.g. acrylonitrile/methyl acrylate) are obtained by dry heating the fibers in a relaxed state and treating the resultant heat relaxed fibers with hot water.

CONDITIONING AGENT FOR CELLULOSE ACETATE FILAMENTS. F. Fortess, C. Hohing and C. E. Kip (to Celanese Corp.). USP 2 805 992, Sept. 10, 1957. (2900)

Conditioning agent especially suitable for continuous filaments of cellulose acetate is composed of mineral oil, a bodied sperm oil, a higher fatty phosphate, a tertiary amine, and a nonionic surface active agent. The agent is highly stable, has excellent lubricating and antistatic properties, and is easily removed by scouring with water.

TEXTILE FIBER LUBRICANT. W. S. Barnard and A. L. Scarbrough (to National Lead Co.). USP 2 805 993, Sept. 10, 1957. (2901)

Textile fiber lubricant consisting of an emulsion with a continuous phase of water and a dispersed phase of an oil-organophilic bentonite mixture.

OPENING, PICKING, FIBER PREPARATION B 1

LINT COTTON OPENER AND CLEANER. E. H. Brooks (to Continental Gin Co.). USP 2 804 655, Sept. 3, 1957. (2902)

FEED MECHANISM IN FIBER PROCESSING MACHINES. W. A. Hunter (to T.M.M. (Research) Ltd). BP 770 463, Mar. 20, 1957. Through BCIRA 37: 217 (1957). (2903)

The fluted rollers described have axial grooves of substantially greater depth and width than the flutes.

CARDING AND COMBING B 2

BROKEN-END SUCTION ARRANGEMENT FOR CONDENSER CARDING ENGINES. H. Thoma (Germany). BP 750 653, June 20, 1956. Through BCIRA 37: 217 (1957). (2904)

Horizontal suction pipes are arranged beneath the rubbing leathers and are fitted with upwardly inclined nozzles (e.g. of rubber) for all the condenser ends. The pipes are connected to two vertical collecting ducts, one at each side of the rubbing mechanism, and these are connected to the intake pipe of a fan mounted on the rubbing mechanism. Air fed from a pressure pipe blows any fiber/collected from marginal or broken ends, back into the hopper that feeds the card.

DRIVE FOR A SET OF CARDING ENGINES. Spinnbau GmbH. BP 751 782, July 4, 1956. Through BCIRA 37: 218 (1957). (2905)

The invention relates to means for driving a set of carding engines (e.g. breaker, intermediate, and condenser) and their individual parts (e.g. feed, delivery, Peralta roller, and tape condensers) synchronously without belts.

CARDING MACHINES FOR COTTONS, VISCOSE STAPLE, ETC. C. Carminati (Italy). BP 769 264, Mar. 6, 1957. Through BCIRA 37: 187 (1957). (2906)

The cards claimed have a main cylinder with rigid clothing and a plurality of clearing cylinders, also with rigid teeth, arranged around the upper periphery.

HOPPER FEEDING MACHINES. J. P. Dobson and H. B. Spencer (to John Haigh & Sons Ltd). BP 770 897, Mar. 20, 1957. Through BCIRA 37: 217 (1957). (2907)

The density of material fed, e.g. to a roller-and-clearer card, is kept uniform by maintaining a constant level in the hopper.

AUTOMATICALLY CONTROLLING THE UNIFORMITY OF WEIGHT PER UNIT LENGTH OF THE OUTPUT FROM A CARDING ENGINE. A. B. D. Cassie and G. H. Thorndike (to Wool Industries Research Assoc.). BP 750 086, June 6, 1956. Through BCIRA 37: 188 (1957). (2908)

To control the weight regularity of sliver delivered by a carding engine, a continuous weighing device is inserted at a convenient place in the path of the sliver and made to operate mechanism for controlling the feed to or delivery from the machine so as to check fluctuations. The description applies to the carding of wool.

DRAWING AND ROVING B 3

DEPOSITING SLIVER IN CANS. O. Steinwandt (to Chr. Mann Maschinenfabrik). BP 767 891, Feb. 6, 1957. Through BCIRA 37: 127 (1957). (2909)

The device is protected from contamination by dust.

DRAFTING ROLL ASSEMBLY. K. Ward (to Fairbairn Lawson Combe Barbour Ltd). BP 768 954, Feb. 27, 1957. Through BCIRA 37: 156 (1957). (2910)

A roller assembly for spinning, roving, or drawing frames consists of a pair of rollers with central holes, a common spindle provided at each end with serrations, bearings mounted on the spindle, and means for applying pressure to the rollers through the bearings. The rollers are pressed on to the common spindle in such a way that the serrations form grooves on the insides of the roller holes, so that the rollers are held firmly in position on the spindle.

DRAFTING ROLL SADDLE WEIGHTING MECHANISM. R. Balmes Solanas (to Estirajes Balmes SA). BP 769 864, Mar. 13, 1957. Through BCIRA 37: 188 (1957). (2911)

CLEARING BOARD FOR DRAFTING ROLLS. R. J. Purdy (to Orr Felt & Blanket Co.). USP 2 804 656, Sept. 3, 1957. (2912)

Inexpensive clearing board which can be discarded when its cloth aprons have been exhausted.

ELECTRICAL STOP MOTION CONTROL DEVICE. E. Breuning (Germany). USP 2 804 744, Sept. 3, 1957. (2913)

Sliver- or roving-activated stop motion device in which the sliver or roving acts as a conductor to close a normally open circuit. Therefore, contact with the material occurs only when normal operation is interrupted.

TOP DRAFTING ROLLS. A. J. Wasley (to Farmington Co.). USP 2 806 258, Sept. 17, 1957. (2914)

Easily assembled and disassembled top drafting roll unit with controllable axial and radial rigidity, provision for grinding the roll covering while the roll is supported by its end caps, and adequate sealing to prevent lint entry into the bearing.

SPINNING, WINDING, TWISTING B 4

CONTROL DEVICE FOR INDICATING BREAKAGE. E. Breuning (Germany). BP 749 833, June 6, 1956. Through BCIRA 37: 188 (1957). (2915)

Device for indicating a break in a running yarn, and, if desired, actuating means for stopping the machine. The yarn passes between an electrode to which a voltage is applied and a testing electrode (not connected to earth) with which the yarn makes "impulse" contact on breaking. In the description, the electrodes are rake-like devices fitted in the pipe line of a broken-end catcher of the suction type. Circuit diagrams.

SPINNING MACHINE BOBBINS. D. D. McGregor (to McGregor & Balfour Ltd). BP 749 865, June 6, 1956. Through BCIRA 37: 188 (1957). (2916)

The bobbin barrel is made with an outer tube of non-metallic material (e.g. wood) and a close-fitting inner tube of metal, one end of which passes through the flange and is spun over against its outer face.

DEVICE FOR DOUBLING YARNS. NV Onderzoekings-instituut Research. BP 750 350, June 13, 1956. Through BCIRA 37: 189 (1957). (2917)

Yarn drawn under tension from a package is passed through a rotating guide and then a radial bore of a yarn storage disc and made to balloon around a second package from which yarn is drawn under tension. The two yarns are doubled together while the first is still ballooning.

PRESSURE ROLLERS FOR SPINNING MACHINES. A. L. Banquarel (to Metales y Plateria Ribera SA). BP 750 675, June 20, 1956. Through BCIRA 37: 218 (1957). (2918)

An oil-impregnated porous metal bush is fitted between a pressure roller and its supporting shaft. The bush rotates on the shaft and some play is allowed between the bush and the roller.

LUBRICATING WASHERS OR OIL-RETAINING WADS FOR SPINNING AND TWISTING SPINDLES. J. M. King. BP 750 780, June 20, 1956. Through BCIRA 37: 218 (1957). (2919)

A sheet of polyurethane foam is compressed so as to effect some disruption of its internal structure, and then passed to a punching or other machine for making washers. A thin sheet of synthetic resin, metal, or other material, impervious to lubricants, may be applied over the bottom surface and outer wall.

RINGS. P. F. Grishin (to T.M.M. (Research) Ltd). BP 750 931, June 20, 1956. Through BCIRA 37: 218 (1957). (2920)

The invention relates to the cross-sectional profile of a ring that provides for optimum contact with an elliptical traveler. In operation, the innermost end of the traveler does not touch the ring and the useful life of the traveler is greatly extended even when producing large packages of yarn at high speed. The flange of the ring is specified as having a flat upper surface and an inner bearing surface the cross-sectional radius of which is not less than 75% of the radius of the working surface of the traveler.

ATTACHING A CONTINUOUSLY-SUPPLIED THREAD TO A BOBBIN OF A RING TWISTING MACHINE. Algemene Kunstzijde Unie NV. BP 751 038, June 27, 1956. Through BCIRA 37: 219 (1957). (2921)

The apparatus consists of (1) a sleeve around the base of the ring spindle having a slit in its wall, (2) a temporary collection device below the slit and (3) a thread cutter between the slit and (2). The thread is passed through the slit, the bobbin is then started, and the cutter comes into play.

APPARATUS FOR REDUCING THE DEPOSITION OF DUST, FLUFF AND THE LIKE ON TEXTILE MACHINERY. Sulzer Frères, SA. BP 751 043, June 27, 1956. Through BCIRA 37: 219 (1957). (2922)

The apparatus (e.g. for ring-spinning machines) consists of a device for sucking away broken ends, dust, and fluff and means for returning part of the air into at least one duct having a porous wall (textile or wire fabric) disposed in the vicinity of surfaces where dust settlement is likely. The gentle flow of clean air issuing from the porous wall displaces the dust.

METHOD AND APPARATUS FOR MECHANICALLY PLACING TRAVELERS ON THE RINGS OF RING SPINDLES. Chimiotex. BP 751 059, June 27, 1956. Through BCIRA 37: 219 (1957). (2923)

The claim is for a hand tool for placing C-shaped travelers on rings. The travelers are assembled in the "magazine" of the pistol-like tool and ejected one by one by a trigger-actuated spring.

SUPPORTING TUBES FOR BEARING ASSEMBLIES FOR SPINDLES IN SPINNING MACHINES. A. L. Banquarel (to Metales y Plateria Ribera SA). BP 751 064, June 27, 1956. Through BCIRA 37: 218 (1957). (2924)

The tubes are made by wrapping round a piece of sheet metal (e.g. steel) which may first be tooled so as to provide ridges around the tubes. A longitudinal gap may be left between the folded edges. The seating members for the bearings may be welded to the flat piece of metal.

YARN BRAKES FOR TEXTILE MACHINES. Sulzer Frères, SA. BP 751 505, June 27, 1956. Through BCIRA 37: 219 (1957). (2925)

The invention relates to a thread brake (e.g. for spinning frames) of the type in which a tensioned body is pressed, when required, against a rigid body with running yarn between them, and concerns a cam and follower for controlling at least one of the bodies so that they provide an open position and at least two braking positions of different and adjustable forces.

DRAFTING HEAD. Spinnbau GmbH. BP 752 631, July 11, 1956. Through BCIRA 37: 250 (1957). (2926)

The invention relates to drafting systems provided with spring-loaded top rollers and a shaft extending the full length of the machine below the front rollers, on which eccentrics are mounted whereby the pressure can be adjusted at individual spindles. To prevent bending of the shaft that carries the bottom rollers it is proposed to fit supporting rollers on the shaft, which may also carry a lever and spring torque compensator.

YARN FEEDING MEANS. J. Williams and H. J. Vilimek. (Brazil). BP 752 716, July 11, 1956. Through BCIRA 37: 250 (1957). (2927)

Means for interrupting the feed between pressure rollers if a yarn fails, e.g. in twisting, consist of a pivoted feeler arm on which is mounted a curved shoe that enters the nip of the rollers when the arm is tripped up.

DRAWING HEADS FOR SPINNING MACHINES. A. Schüssler and E. Schäfer (to VEB Spinnereimaschinenbau Karl-Marx-Stadt). BP 769 602, Mar. 13, 1957. Through BCIRA 37: 188 (1957). (2928)

The invention relates to a method of loading the top rollers of ring spinning machines, in which the weight lever is mounted independently of the saddle-supporting arm.

AUTOMATIC ELECTRIC STOP MOTIONS. J. R. Bee (to Fairbairn Lawson Combe Barbour Ltd). BP 769 793, Mar. 13, 1957. Through BCIRA 37: 188 (1957). (2929)

One-half of the contacting mechanism oscillates or rotates, and difficulties due to dust and fly are avoided. The arrangement is described in connection with a drafting head.

DRAFTING MACHINES. J. S. Waite (to Fairbairn Lawson Combe Barbour Ltd). BP 769 800, Mar. 13, 1957. Through BCIRA 37: 188 (1957). (2930)

The use of a toggle joint in the arm that acts on the roller-bearing saddle in a spinning or roving frame is described.

VENTILATION AND DUST REMOVAL SYSTEMS OF RING SPINNING MILLS. R. Sutcliffe (to Textile Air Systems Ltd). BP 770 219, Mar. 20, 1957. Through BCIRA 37: 219 (1957). (2931)

The driving motors are at the same end of each machine as a suction cleaning unit and the exhaust hood is connected to the ventilation control system.

ELECTRICALLY-DRIVEN SPINNING, TWISTING AND WINDING MACHINES. Barmer Maschinenfabrik AG. BP 770 710, Mar. 20, 1957. Through BCIRA 37: 219 (1957). (2932)

Winding means to give constant speed at a predetermined tension are described.

BALLOON RESTRICTING DEVICES FOR SPINNING AND TWISTING MACHINES. B. Pross. BP 770 719, Mar. 20, 1957. Through BCIRA 37: 219 (1957). (2933)

The devices have two, complementary, movable semi-circular guide members.

TWISTING AND WINDING APPARATUS. C. A. Steele (to Universal Winding Co.). USP 2 803 939, Aug. 27, 1957. (2934)

Two-for-one twisting apparatus with low pressure pneumatic means for threading its multiple twist spindle, as well as an auxiliary motor for driving the winding mechanism until the spindle drive reaches its predetermined operating speed.

COP WINDING CAM. T. M. Duncan. USP 2 804 273, Aug. 27, 1957. (2935)

Builder cam for producing a cop having a cylindrical central portion and tapered ends which produces a filling winding in which every fourth stroke of the traveler lays yarn below the three immediately preceding strokes. The resulting cop resists sloughing off and permits higher winding-off speeds.

END FINDING AND TYING MECHANISM FOR CHEESE WINDING MACHINE. R. J. Mahoney (to Barber-Colman Co.). USP 2 804 274, Aug. 27, 1957. (2936)

SPINDLE BEARING. J. S. Roch (Spain). USP 2 806 342, Sept. 17, 1957. (2937)

Movable pendular bottom bearing which permits the spindle shaft to adapt itself to any lateral movements affecting the spindle, thus eliminating vibration effects.

YARNS B 5

TREATMENT OF CELLULOSE ACETATE YARNS. T. Geeson (to Adshead & Geeson Ltd). BP 752 466, July 11, 1956. Through BCIRA 37: 250 (1957). (2938)

Yarns spun from cellulose acetate, staple or continuous filament, are passed continuously or intermittently, through steam to obtain extensibility, then through hot dry air, and finally over and in contact with a surface at about 285° F to effect stabilization.

APPARATUS FOR PRODUCING CURLED YARN. Algemene Kunstzijde Unie NV. BP 770 018, Mar. 13, 1957. (Addition to BP 767 835). Through BCIRA 37: 189 (1957). (2939)

The tube through which the yarn, and an air stream, passes has a notch at the entrance and a system of thread guides. Curled yarn with or without "nubs" may be produced.

ELASTIC YARN. B. H. Foster (to U. S. Rubber Co.). USP 2 804 745, Sept. 3, 1957. (2940)

Balanced elastic yarn is produced by wrapping heat shrinkable thermoplastic strands around a low twist rubber core in a direction opposite to that of the core twist and heating to shrink the thermoplastic yarn.

VARIEGATED YARNS AND FABRICS. H. Miller (to American Viscose Corp.). USP 2 805 465, Sept. 10, 1957. (2941)

Fabrics exhibiting a uniform salt and pepper effect are prepared from variegated composite synthetic yarns composed of filaments with randomly distributed colored, clear, and combined colored and clear sections.

THREAD REMOVAL CONTROL DEVICE FOR SEWING THREAD SPOOL. L. Markoff-Moghadam. USP 2 806 659, 2 806 660 and 2 806 661, Sept. 17, 1957. (2942)

FABRIC PRODUCTION C

WARPING, SLASHING, YARN PREPARATION C 1

SETTING OF AXMINSTER SPOOLS. P. W. Robinson. BP 750 795, June 20, 1956. Through BCIRA 37: 221 (1957). (2943)

The invention relates to the setting of spools in the weaving of pile fabrics by the spool Axminster method, that is, to the winding on to the spools of the required number of pile yarns, side by side and in the right color sequence for the desired pattern.

MACHINE FOR PRODUCING BOBBINS AND SPOOLS. H. E. M. Westergren (to AB Industrikompaniet). BP 750 844, June 20, 1956. Through BCIRA 37: 222 (1957). (2944)

MOUNTING A CONICAL YARN WINDING TUBE ON THE SPINDLE OF A WINDING FRAME. Algemene Kunstzijde Unie NV. BP 751 387, June 27, 1956. Through BCIRA 37: 221 (1957). (2945)

A tubular body fixed on the spindle has spring clamps, directed towards the free end, to fasten the larger end of the conical tube, and a spreading device on the spindle is pressed into the operative position against the inner side of the clamps by means of a spring round the spindle and out of the operative position by a device at the free end of the spindle.

CONTAINER FOR YARN BOBBINS. Maschinenfabrik Schweiter AG. BP 751 397, June 27, 1956. Through BCIRA 37: 222 (1957). (2946)

To avoid damage caused by allowing bobbins to fall on one another when filling usual containers, it is proposed to insert them from the bottom. The container has parallel side walls, a rear wall, a top cover with handle and a base plate with an extension beyond the rear wall fitted with another handle. The base plate (or a side wall) has an aperture bounded by shut-off flaps through which bobbins are inserted.

WINDING UNIT FOR AUTOMATIC COP WINDING MACHINES. B. G. I. Kelen and I. Kerényi (to 'Licencia' Találmanyokat Ertékesitö Vállalat). BP 751 441, June 27, 1956. Through BCIRA 37: 221 (1957). (2947)

All the basic functions of (a) traversing the yarn, (b) compressing, and (c) advancing the cop are performed by an "idler" that has a grooved track and bears on the top of the cop for forming the nose and advancing it along its spindle.

DEVICE FOR FILLING A CONTAINER WITH BOBBINS RECEIVED FROM A WINDING HEAD. Maschinenfabrik Schweiter AG. BP 751 995, July 4, 1956. Through BCIRA 37: 221 (1957). (2948)

A container into which pirns are filled through a hole in the bottom is mounted on a bracket on the winding machine. This also has a chute down which the pirns travel to the container from individual winding heads.

WEFT BOBBIN FOR LOOMS. O. and P. Fallscheer. BP 751 902, July 4, 1956. Through BCIRA 37: 222 (1957). (2949)

The base of the bobbin is formed of three metal sleeves the inner one being flanged over the other two at the lower edges and having surface irregularities that grip the material of the bobbin tube.

LEASE RODS FOR YARN CROSSING. Titan AG. BP 752 169, July 4, 1956. Through BCIRA 37: 253 (1957). (2950)

The rod has a cross-section of small but uniform thickness and is bent or curved to form at least one longitudinal groove for receiving a thread-separating member of a cross picker. Cross-sections of shallow U and S shapes are shown.

APPARATUS FOR REMOVING YARN REMNANTS FROM CONICAL AND CYLINDRICAL BOBBINS. Georg Fischer AG. BP 769 290, Mar. 6, 1957. Through BCIRA 37: 191 (1957). (2951)

BEAMING MACHINES. Thomas Holt Ltd. BP 769 302, Mar. 6, 1957. Through BCIRA 37: 191 (1957). (2952)

Means are provided for facilitating the loading and unloading of beams into and out of a beaming machine.

APPARATUS FOR SUPPLYING BOBBINS TO WINDING MACHINES. C. G. Rosenkranz, H. Halstenbach and A. Plütte (to Halstenbach & Co.). BP 769 512, Mar. 6, 1957. Through BCIRA 37: 191 (1957). (2953)

CONTROL AND THREADING OF WARP THREADS. J. W. Scaysbrook. BP 769 556, Mar. 13, 1957. Through BCIRA 37: 191 (1957). (2954)

The invention relates to the separation of ends on a warp beam for a warp knitting machine.

MOUNTING OF BOBBINS OF YARN OR ROVING ON THE CREELS OF TEXTILE MACHINES. Nazionale Cogne SpA. BP 769 960, Mar. 13, 1957. Through BCIRA 37: 191 (1957). (2955)

Bobbins are mounted without the use of an internal spindle.

APPARATUS FOR TENSIONING FILAMENTARY MATERIAL. E. Martin (to Dunlop Rubber Co. Ltd). BP 770 037, Mar. 13, 1957. (Divided out of BP 770 036). Through BCIRA 37: 191 (1957). (2956)

Control of tension in glass-fiber yarn as it is being fed to a winding machine in the manufacture of glass-fiber air bottles is described.

APPARATUS FOR MAINTAINING A REQUIRED TENSION IN CONTINUOUSLY FED SIZED WARP. Gebrüder Sucker GmbH. BP 770 699, Mar. 20, 1957. Through BCIRA 37: 222 (1957). (2957)

An electrical servo-operated device is used, e.g., in warp sizing machines.

SIZING AGENTS FOR CELLULOSE WARPS. M. J. Scott and A. E. Peacock (to Monsanto Chemical Co.). USP 2 806 020, Sept. 10, 1957. (2958)

Method of preparing copolymers of vinyl acetate and ethylenically unsaturated carboxylic compounds (e.g. crotonic acid) as sizing agents for cellulose warps.

WEAVING C 2

DRIVING COUPLING FOR LOOMS. J. S. Plenderleath (to Jute Industries Ltd). BP 750 273, June 13, 1956. Through BCIRA 37: 192 (1957). (2959)

Means for coupling associated mechanisms, e.g. the main shaft of a loom and the rotary take-up motion, so that there is a predetermined time lag between the commencement of rotation of the two. The driving couple (clutch, etc.) includes a member, connected to the drive, that makes an initial axial movement during which the clutch remains open and a subsequent axial movement by which the clutch is engaged.

SHUTTLE BOXES. F. S. Eves (to Munster Simms & Co. Ltd). BP 750 491, June 20, 1956. Through BCIRA 37: 223 (1957). (2960)

The invention relates particularly to the loom fitted with hydraulic change-box mechanism. The shuttle box is as long as the shuttle and consists of a single swell for arresting the shuttle, and, for control of the stop-motion, a movable feeler located beyond the swell in the direction of the travel of the shuttle as it enters the box and on the opposite side of the box from the swell. The feeler forms one arm of a bell-crank lever the other end of which is connected to one end of a slide member the other end of which engages the control valve lever of the hydraulic system.

PILE FABRICS. Koninklijke Vereenigde Tapijtfabrieken NV. BP 750 887, June 20, 1956. Through BCIRA 37: 224 (1957). (2961)

The defect known as "shading" in plain carpets, where optical effects resembling stains develop in use, is overcome by employing in the successive pile tufts or groups of tufts, yarns of opposite twist directions.

DOUBLE LIFT SHEDDING MOTION. R., H., and O. Staubli (Switzerland). BP 751 728, July 4, 1956. Through BCIRA 37: 223 (1957). (2962)

The claim is for a double-lift dobby with which the movement of the pattern card is performed every second pick during the "lost motion" of a lifting knife or pair of such knives, and reversing the loom for the purpose of taking out faulty picks is possible.

DOBBY LOOMS. R., H., and O. Staubli (Switzerland). BP 751 742, July 4, 1956. Through BCIRA 37: 223 (1957). (2963)

A device on dobby machines for the positive control of the draw hooks with respect to their associated knives is characterized in that during the "lost motion" of a knife or a pair of knives all the hooks are brought into engagement with the knife (or one of the pair of knives) and afterwards those hooks that do not have to be drawn out by the particular knife are positively brought out of engagement with it before the lost motion is completed.

AUTOMATIC SHUTTLE CHANGING MECHANISMS. Société des Mouvements Automatiques Poncet. BP 751 886, July 4, 1956. Through BCIRA 37: 223 (1957). (2964)

The device consists of an auxiliary shuttle box, means for bringing it into position on the lay for receiving the empty shuttle, means for opening the box towards the end of the beating stroke so that the empty shuttle can be ejected by momentum, and an intermediate receiver just in front of the foremost position of the lay for the reception of the ejected shuttle. This receiver has a wall, openable by the action of the shuttle transfer plate, through which the empty shuttle may fall into the normal shuttle box on closure of the shed.

MANUFACTURE OF TUFTED FABRICS. E. T. C. Brinton (to Brintons Ltd). BP 751 968, July 4, 1956. Through BCIRA 37: 224 (1957). (2965)

The principle of the spool carpet loom is adapted to the manufacture of fabrics (e.g. carpets) in which the tufts are secured to an adhesive-covered backing.

MANUFACTURE OF TUFTED FABRICS. H. F. Lowe and E. T. C. Brinton (to Brintons Ltd). BP 751 969, July 4, 1956. Through BCIRA 37: 224 (1957). (2966)

The claim is for cam means whereby tuft-forming spools are given two separate components of motion so that tufts can be laid in the fabric (e.g. a carpet having a backing covered with an adhesive) without removing the spool from its chain or stopping the chain.

CIRCULAR LOOMS. Société d'Applications Générales d'Electricité et de Mécanique. BP 752 298, July 11, 1956. Through BCIRA 37: 253 (1957). (2967)

The invention relates to means for the timely detection of jammed warp ends, foreign bodies in the warp shed or an incompletely inserted pick, in weaving with a circular loom, combined, if desired, with a stop-motion. A feeler mounted on the trailing end of the weft-laying beak of a shuttle, behind the point at which the weft leaves the beak, explores the apex of the shed next to the cloth tube and is displaced if it meets an obstruction.

AUTOMATIC WEFT SUPPLY MOTION. Valentin Patent-Gesellschaft GmbH and Textilmaschinenfabrik Schwenningen GmbH. BP 752 766, Apr. 11, 1956. Through BCIRA 37: 253 (1957). (2968)

An automatic loom with a liftable and lowerable shuttle box is fitted with (1) a bobbin hammer carried by a lever, (2) a lever mounted for oscillation and lengthwise movement and carrying the transfer latch of the weft supply motion, the latch being movable between operative and inoperative positions, and disposed for engagement by a bunter on the lay when in its operative position, and (3) means connecting (1) and (2) so that the hammer is actuated when the bunter engages the transfer latch.

LOOMS. Verbrugge Frères (Belgium). BP 769 729, Mar. 13, 1957. Through BCIRA 37: 191 (1957). (2969)

The invention relates to a mechanical warp stop-motion device and to heddles for such a device.

CLOTH ROLLER DRIVING OF LOOMS. H. G. Hales, W. Brown and A. Frost. BP 770 227, Mar. 20, 1957. Through BCIRA 37: 223 (1957). (2970)

The cloth roller is driven through friction surfaces from a ratchet wheel rotated by two pawls, mounted on an arm that is oscillated by the lay, and only rotates when the tension on the fabric does not exceed a predetermined amount.

WEB TENSION CONTROL SYSTEMS. W. Baumrucker and C. M. Flint (to Research Corp.). BP 770 969, Mar. 27, 1957. Through BCIRA 37: 223 (1957). (2971)

Means for providing a drag between the web roll and the processing apparatus, e.g. in cloth weaving, dyeing, and finishing, are described.

AXMINSTER LOOM. H. Hughes (to Toronto Carpet Mfg. Co. Ltd). USP 2 804 096, Aug. 27, 1957. (2972)

Reed structure for Axminster loom which acts as a yarn clamping as well as a weft beating mechanism thus substantially eliminating waste of pile yarn.

PICKER STICK BUMPER AND BOBBIN DEFLECTOR. J. B. McCoin. USP 2 804 097, Aug. 27, 1957. (2973)

MODIFIED BOYCE WEAVER'S KNOT. C. R. Smith (to Mellor Bromley & Co. Ltd). USP 2 804 676, Sept. 3, 1957. (2974)

FABRIC TAKE-UP FOR LOOMS OR KNITTING MACHINES. G. E. Clentimack (to Draper Corp.). USP 2 804 760, Sept. 3, 1957. (2975)

Variable speed drive for take-up device which acts to maintain a uniform fabric width and prevent undesired contraction due to tension variations.

ELECTROMAGNETICALLY CONTROLLED SHUTTLE-THROWING SYSTEM FOR AUTOMATIC LOOMS. A. T. Godschalx. USP 2 805 686, Sept. 10, 1957. (2976)

WEFT YARN FEEDING DEVICE. E. Pfarrwaller (to Sulzer Freres SA). USP 2 805 687, Sept. 10, 1957. (2977)

WEFT YARN CUTTER. G. Zapf (to Firma Vereinigte Seidenwebereien AG). USP 2 806 487, Sept. 17, 1957. (2978)

Electromagnetically operated weft yarn cutter in which the blade is responsive to the entrance of the yarn into the mouth of the cutter.

KNITTING C 3

PILE FABRICS ON FLAT WARP KNITTING MACHINE. E. F. Clark and J. R. Little, Jr. (to B. F. Goodrich Co.). USP 2 802 355, Aug. 13, 1957. (2979)

A device for engaging and moving the loops so as to avoid stretching.

KNITTING MACHINE YARN CLEARER. B. J. E. Lebocey (France). USP 2 804 761, Sept. 3, 1957. (2980)

MULTIPLE SECTION STRAIGHT BAR KNITTING MACHINE. D. H. Turner. USP 2 805 562, Sept. 10, 1957. (2981)

Mechanism for individually regulating the needle bars on each section of a multiple section knitting machine in order to maintain uniform fabric lengths in the respective sections.

CHANGEABLE PATTERN DRUM FOR KNITTING MACHINES. W. B. Brewer and E. Hinkle. USP 2 805 563, Sept. 10, 1957. (2982)

Pattern drum in which any portion of a pattern on the drum periphery may be altered without disturbing adjacent portions of the existing pattern.

KNIT FUR FABRICS. D. P. Moore. USP 2 805 564, Sept. 10, 1957. (2983)

Method of knitting fur-like fabrics to simulate mink, sable, marten, or any animal furs having a stripe of varying color.

NONBULKY SEAM FOR FULL-FASHIONED NYLON HOSE. J. C. Bolles, R. M. Matthews and F. E. Bobo, Jr. (to Chadbourn Gotham, Inc.). USP 2 806 367, Sept. 17, 1957. (2984)

Flat seams of minimum bulk and visibility are produced by knitting a panel of a chemically (or otherwise) removable thread at each selvage edge, seaming in the usual manner, and removing the removable thread.

FABRICS C 4

FABRIC COMPOSED OF ADHESIVELY-UNITED YARNS. E. Bobkowicz. BP 749 914, June 6, 1956. Through BCIRA 37: 192 (1957). (2985)

Single warp and weft yarns are arranged in alternate layers in such a way that on pressing the layers together (with a bonding agent) the yarns in one layer bed down between yarns in other layers.

COMPOSITE OR MULTI-PLY TEXTILE FABRIC. O. G. J. Struycken de Roysancour (Netherlands). BP 750 189, June 13, 1956. Through BCIRA 37: 192 (1957). (2986)

A blanket consists of at least one layer of woven or knitted fabric having impressed cavities the walls of which are stiffened by impregnation with a synthetic resin or other suitable product, and a further layer of similar impregnated fabric that covers the cavities and thus creates numerous air cells in the blanket.

COMPOSITE TEXTILE MATERIALS FOR CARPETING. F. E. Slater. BP 751 732, July 4, 1956. Through BCIRA 37: 224 (1957). (2987)

Multi-ply yarns are laid side by side on a base fabric and fixed by stitching or by means of an adhesive.

CORDUROY FABRICS. Hazewind Kledingindustrie NV. BP 750 833, June 20, 1956. Through BCIRA 37: 224 (1957). (2988)

The claim is for a corduroy fabric in which the pile threads withstand rough wear without the use of glue to hold them. The pattern repeat comprises at least 14 warp ends and at least six weft picks.

UNIFORM MAT OF FIBERS: APPARATUS. Billesholms AB. BP 751 134, June 27, 1956. Through BCIRA 37: 216 (1957). (2989)

Fibers (especially of glass) are carried by a stream of air into a chamber the floor of which is a conveyor belt. The stream is made to traverse lengthwise of a perforated, rotating drum which communicates internally with a suction fan that exhausts the region against which the stream is directed. A mat of fiber is formed on the evacuated part and then falls off the drum on to the conveyor belt.

REINFORCING WOVEN MATERIALS FOR MAKING LAMINATED ARTICLES. Technique du Verre Tisse. BP 751 392, June 27, 1956. Through BCIRA 37: 224 (1957). (2990)

It is pointed out that the crimp or "sinuosity" of the yarns in common woven fabrics used for reinforcing laminated plastics is detrimental to the strength and rigidity of the products. Accordingly, it is proposed to use fabrics in which the main warp and weft ends (e.g. of glass filaments) are not interlaced but merely held in place by interwoven finer yarns.

CAMOUFLAGE MATERIAL. H. Burgtorf, E. Schwarz and J. H. Benecke. BP 752 347, July 11, 1956. Through BCIRA 37: 259 (1957). (2991)

Thermoplastic sheeting, or fabric impregnated or coated with a thermoplastic resin, is printed with an imitative pattern that produces a camouflage effect in the visible spectrum and also has a high reflection for infrared (25-95%), and is simultaneously or subsequently perforated, e.g. by hot stamping. The material is suggested for clothing, wrappings, tentage, etc.

MANUFACTURE OF BIAS BINDING. C. F. Brouncker & Co. Ltd. BP 770 177, Mar. 20, 1957. Through BCIRA 37: 224 (1957). (2992)

A machine for folding the edges of strip material, particularly nylon, is described; one of the pressure rollers is heated.

WOVEN ELASTIC FABRIC. H. F. Sherman. USP 2 804 099, Aug. 27, 1957. (2993)

Elastic fabric with a soft velvety surface obtained by floating groups of stretchable permanently crimped yarns outward in the direction of the fabric stretch.

LOW FRICTION FABRIC. C. S. White. USP 2 804 886, Sept. 3, 1957. (2994)

Compound woven fabric, suitable for bearing and sealing applications, has a low friction surface on one side and a bondable surface on the other.

TWO-PLY ELASTIC FABRIC. S. F. Siciliano (to George C. Moore Co.). USP 2 804 100, Aug. 27, 1957. (2995)

In a two-ply elastic fabric, each ply consists of elastic warps and a nonelastic weft, the plies being united at every pick by nonelastic binder warps to limit the stretch of the elastic warps. The two plies may be simultaneously woven on a double shuttle loom.

SEAMLESS PILE COTTON COVER FOR OFFSET PRINTING DAMPENER. F. Kameda (Japan). USP 2 804 762, Sept. 3, 1957. (2996)

ABRASIVE CLOTH MANUFACTURE. J. R. O'Neil, Jr. and H. W. Buell (to Carborundum Co.). USP 2 805 136, Sept. 3, 1957. (2997)

Abrasive cloth composed of a starch filled fabric base to which the abrasive grains are bonded by a heat-hardened phenol formaldehyde resin.

KNIT PILE FABRIC. M. J. A. Laval (France). USP 2 805 463, Sept. 10, 1957. (2998)

Knit fabrics with the appearance of suede or buckskin are prepared by wet shrinking a knit fabric composed of a mixture of shrinkable polyvinyl fibers and nonshrinkable fibers, and subjecting the treated fabric to mechanical abrasion followed by dry shrinkage.

FINISHING AND CHEMICAL PROCESSING D

CHEMICAL PROCESSES D 1

FLAMEPROOFING COMPOSITION. Ciba Ltd. BP 747 014, Mar. 28, 1956. Through BCIRA 37: 20 (1957). (2999)

COPOLYMERIC PRODUCTS. F. Reeder (to Courtaulds Ltd). BP 749 886, June 6, 1956. Through BCIRA 37: 185 (1957). (3000)

The affinity for dyes of copolymers of acrylonitrile with esters of unsaturated acids (e.g. methyl acrylate) is enhanced by causing them to react (in yarn form) with a quaternary ammonium compound of the type of β-aminoethyltriethylammonium chloride.

IMPROVING THE CREASE RESISTANCE OF TEXTILES. D. A. Derrett-Smith and R. W. Kinkead (Linen Industry Research Assoc.). BP 750 002 and 750 003, June 6, 1956. Through BCIRA 37: 199 (1957). (3001)

(I) A crease-proofing treatment for linen comprises (a) shrinking and swelling with caustic soda following by drying, (b) impregnation with a synthetic resin precondensate following by drying, and (c) exposure to saturated steam containing formaldehyde vapor (about 10%). Steps (b) and (c) are claimed for materials of regenerated cellulose.

TREATMENT OF REGENERATED CELLULOSE PRODUCTS. E. H. Sharples (Courtaulds Ltd). BP 750 088, June 6, 1956. Through BCIRA 37: 199 (1957). (3002)

To reduce the readiness of viscose or cuprammonium rayon to imbibe water, the fiber or yarn is exposed to the action of ammonia, the vapor of hydrazine hydrate or of a lower alkylamine, under pressure (1-5 atm.) and in the cold (-20 to +20° C). The effect varies with the moisture regain of the material (25-50% is the preferred range) and other conditions.

ROTPROOFING CELLULOSIC MATERIALS. P. H. Clark (Dux Chemical Solutions Co. Ltd). BP 750 183, June 13, 1956. Through BCIRA 37: 200 (1957). (3003)

Cellulosic fabrics are impregnated with ammonium naphthenate solution, mangled, and then impregnated with cuprammonium hydroxide solution, mangled and dried. The aim is to leave about 1% of copper in the fabric, partly in the form of copper naphthenate. The double treatment is claimed to have the advantage of the depilating effect of the cuprammonium at a lower total copper content.

PRESCOURING AND BLEACHING TEXTILE FIBERS. Boehme Fettchemie GmbH. BP 750 352, June 13, 1956. Through BCIRA 37: 196 (1957). (3004)

Cotton goods are treated with a preparation containing pectinase (e.g. flax retting liquor) and, where necessary, a diastatic desizing agent.

COMBINED ROTPROOFING AND MILDEWPROOFING. A. E. Henshall and J. R. F. Jackson (to Imperial Chem. Industries Ltd). BP 750 501, June 20, 1956. Through BCIRA 37: 233 (1957). (3005)

The textile material is treated with a hydroxydiarylmethane (dissolved in caustic soda) and a salt of a bisbiguanide. The agents may be applied in succession, with intermediate drying, in either order. They form a precipitate in aqueous media and this may be separated and applied as a dispersion or solution in methyl alcohol.

ROTPROOFING RUBBERIZED TEXTILES. A. E. T. Neale and B. D. Rowland (to Dunlop Rubber Co. Ltd). BP 750 513, June 20, 1956. (Addition to BP 663 273). Through BCIRA 37: 232 (1957). (3006)

Rubberized textiles (e.g. tires, belting, hose, etc.) are protected from rotting by including in the rubber mixing an arylphenol or halogenated derivative thereof, e.g. o-phenylphenol, o-phenyl-o'-chlorophenol or 2:2'-dihydroxy-5:5'-dichlorodiphenylmethane. Results of biological tests are tabulated.

PROCESS AND APPARATUS FOR LIQUID TREATMENT OF FABRICS. Tintoria Comense SpA. BP 750 859, June 20, 1956. Through BCIRA 37: 233 (1957). (3007)

The fabric moves in two sets of festoons, one set fitting in the spaces in the other set so that the gap between the two sets is less than 25 mm. The fabric moves in opposite directions in the two sets and at such a speed that a whirling condition is established in the liquid confined between them.

BOBBIN TUBES FOR THE WET TREATMENT OF YARN PACKAGES. Scholl AG Zofingen. BP 751 457, June 27, 1956. Through BCIRA 37: 222 (1957). (3008)

They consist of a pair of cylindrical or frusto-conical cages formed essentially of wire "hairpins" attached at their ends to rings and linked together at the bends by passing a ring of wire through the bends in the upper and lower cages alternately. A helical spring extends from the top end ring to the bottom one, through the "hairpins."

CLEANING OR PURIFYING CELLULOSE FIBERS BY BOILING AND BY KIER BOILING. Sandoz Ltd. BP 751 658, July 4, 1956. Through BCIRA 37: 229 (1957). (3009)

The invention relates to the addition of compounds of the type of sodium oleyldodecaglycolhydroxyacetate to alkaline scouring liquors for cotton and viscose rayon yarns and fabrics.

BLEACHING CELLULOSE, TEXTILE FIBERS, AND LIKE MATERIALS. Deutsche Gold- und Silber Scheideanstalt. BP 751 709, July 4, 1956. Through BCIRA 37: 229 (1957). (3010)

To protect the metal from corrosion in bleaching by means of chlorites it is proposed to apply to the plant a coating of an acrylic resin, e.g. Plexiglas.

CONTINUOUS PROCESS FOR BLEACHING CELLULOSIC TEXTILES. Deutsche Gold und Silber Scheideanstalt. BP 752 381, July 11, 1956. (Addition to BP 738 903). Through BCIRA 37: 259 (1957). (3011)

The material is repeatedly and thoroughly penetrated by a chlorite bleach liquor, for about 8-15 minutes at a temperature up to 60° C, mangled, steamed to bring the temperature up to 100° C, and immediately fed into a J-box where each portion stays for 5-15 times as long as it was in the bleaching tank.

TEXTILE WATER-REPELLENT AGENTS. Farbenfabriken Bayer AG. BP 767 945, Feb. 13, 1957. Through BCIRA 37: 137 (1957). (3012)

An amine salt, e.g. the stearylamine salt of stearyl carbamic acid, is used.

STORAGE FOR WEB MATERIAL DURING CONTINUOUS TREATMENT. J. Dungler (France). BP 768 876, Feb. 20, 1957. Through BCIRA 37: 163 (1957). (3013)

The storage device is small, retains the fabric in open width and discharges it at the same uniform rate, and may be used in continuous heating operations, e.g. in steaming, polymerizing, desizing, scouring, and bleaching.

ANTISTATIC FINISHING OF SYNTHETIC FIBERS. A. Schofield and H. J. Shearing (to Calico Printers' Assoc. Ltd). BP 769 014, Feb. 27, 1957. Through BCIRA 37: 167 (1957). (3014)

Antistatic agents that withstand laundering and drycleaning are formed by the reaction between a polyhydric alcohol, such as polyethyleneglycol, and a polymer of an unsaturated monobasic acid (e.g. acrylic acid) or a copolymer of maleic acid and a vinyl alkyl ether.

ANTISTATIC TREATMENT. Boehme Fettchemie GmbH (Germany). BP 769 039, Feb. 27, 1957. Through BCIRA 37: 167 (1957). (3015)

Antistatic agent produced by additions of an alkylene oxide (e.g. ethylene oxide) to an acid ester of a phosphoric acid and a hydroxyl-compound containing 6 or more carbon atoms per molecule (e.g. phosphorus pentoxide and a fatty alcohol).

PREPARATION FOR DYEING AND PRINTING COTTON TEXTILES. Deutsche Gold- und Silber-Scheideanstalt. BP 769 658, Mar. 13, 1957. Through BCIRA 37: 197 (1957). (3016)

The material, without previous boiling, is bleached in a chlorite solution and then subjected for only a short time to a very dilute (0.3-0.5% by weight) solution of alkali, particularly sodium carbonate, at 90-95° C, before dyeing or printing. Wettability is achieved in this way very cheaply.

MACHINE FOR SHRINKING KNITTED FABRICS. S. G. Andersson and K. I. J. Rosen. BP 769 853, Mar. 13, 1957. (Addition to BP 747 891). Through BCIRA 37: 199 (1957). (3017)

The grooves in the rollers are provided with loose rings.

PROCESS FOR PRODUCING PERMANENT MECHANICAL EFFECTS ON LIGHTWEIGHT FABRICS. Heberlein & Co. AG. BP 770 082, Mar. 13, 1957. Through BCIRA 37: 199 (1957). (3018)

The fabric (e.g. cotton muslin or voile) is shrunk (e.g. with 20-30° Bé sodium hydroxide solution) prior to the application of the synthetic resin; it is then able to withstand the stretching associated with the embossing treatment.

MANGLING MACHINES FOR LIQUID TREATMENT OF TEXTILES. Comerio Ercole SpA. BP 770 250, Mar. 20, 1957. Through BCIRA 37: 233 (1957). (3019)

A differential gear system for maintaining uniform tension is described.

POWER TRANSMISSION AND CONVEYOR BELTING. G. E. Watts, S. B. Hainsworth and H. J. Perry (to J. H. Fenner & Co. Ltd). BP 770 524, Mar. 20, 1957. Through BCIRA 37: 232 (1957). (3020)

Impregnation of solid-woven material with polyvinyl chloride is described.

TREATMENT OF CELLULOSIC TEXTILES WITH ACETALS. S. Laballe. Ital. Pat. 512 302, Jan. 31, 1955. Summary in Chem. Abstracts 51: 12501 (1957). (3021)

Cellulosic materials (fibers, tissues, pulps, and rayons) are treated with acetal solutions of various compositions at 100-110° for 12 hours or more. The main characteristic of the treated fibers is improved elasticity and a cool and wool-like feeling.

SQUEEZE ROLLS FOR TEXTILE FINISHING. E. Küsters (Germany). USP 2 801 461, Aug. 6, 1957. (3022)

Soft squeeze rolls composed of latex impregnated polyamide fiber discs arranged side by side on a steel shaft and compressed to a Shore point of 92°.

BOILING-OFF AND BUCKING OF CELLULOSE FIBERS. K. Hofer and H. Hemmi (to Saul & Co.). USP 2 802 715, Aug. 13, 1957. (3023)

Gray-state cellulose fibers, yarns, or fabrics are prepared for subsequent processing (mercerization, bleaching, dyeing, finishing, etc.) by washing at 75 to 140° C in a bath containing caustic soda and a polyether carboxylic acid, e.g., sodium lauryl hexaglycoloxyacetate, to remove impurities and make the fibers hydrophilic.

EMBOSSING AND PLEATING WITHOUT HEAT. G. H. Wood, Jr. (to Apponaug Co.). USP 2 802 752, Aug. 13, 1957. (3024)

Resin composition (consisting of a catalyst, a thermosetting resin, and a thermoplastic resin) which permits pleating or embossing of fabrics, as well as simultaneous coloring, without the use of heat.

WATER-REPELLENT COTTON FABRICS. B. A. Ashby and C. J. Hoffman (to General Electric Co.). USP 2 802 754, Aug. 13, 1957. (3025)

Water-repellent cotton, permanent to laundering, is prepared by treating the cotton with a melamine derivative, insolubilizing the melamine, applying an alkyl polysiloxane, and heating to insolubilize the polysiloxane.

DEVICE FOR STRIPPING LIQUID FROM A MOVING THREAD. W. R. Kocay and H. Bundegaard (to Am. Cyanamid Co.). USP 2 803 052, Aug. 20, 1957. (3026)

ABSORBENT COTTON PROCESSING. F. K. Mesek (to Johnson & Johnson). USP 2 803 125, Aug. 20, 1957. (3027)

Uncompressed cotton fibers carried by a gas stream are deposited in a thin uniform layer over a solid surface. The layer is subjected to strong agitation in a chemical processing liquid, followed by a steeping zone with very little agitation. Impurities and waxes are transferred during the agitation and steeping steps, and when the liquid is removed there is no need for further washing.

PROCESS OF BLEACHING AND DESIZING COTTON GRAY GOODS. W. A. S. White (to Imperial Chem. Industries Ltd). USP 2 803 517, Aug. 20, 1957. (3028)

Multi-stage process for bleaching and desizing cotton gray goods consists of (1) degreasing and dewaxing with bath of organic solvent (trichloroethylene and perchloroethylene group) at boiling point, (2) removing solvent, (3) desizing and partial bleaching with alkaline peroxygen bath and steaming, (4) passing through second alkaline peroxygen bleach bath, (5) developing full bleach with steaming.

TREATMENT OF CELLULOSIC MATERIALS TO IMPART FLAME RESISTANCE THERETO. A. J. Erbel and D. L. Kenaga (to Dow Chem. Co.). USP 2 803 562, Aug. 20, 1957. (3029)

Treatment of cellulosic materials such as wood, paper, and textiles made from cotton and regenerated cellulose with a water, fire, and weather resistant composition containing a bis-(2-haloalkyl)alkenyl phosphonate.

RESIN TREATED TEXTILE MATERIALS. F. H. Steiger and J. P. Shelley (to Rohm & Haas Co.). USP 2 803 563, Aug. 20, 1957. (3030)

Treatment of fibers, filaments, yarns or fabrics, with resin-forming reaction products of the dicarbamate (or biscarbamate) of diethylene glycol to provide novel textile materials and to provide fabrics which are improved in respect to properties such as stiffness and hand and resistance to washing.

ACETYLENE DIUREA-FORMALDEHYDE REACTION PRODUCT AND TEXTILE TREATMENT. D. M. Gagarine and H. Repokis (to Dan River Mills). USP 2 803 564, Aug. 20, 1957. (3031)

Treatment of cellulosic textile fabrics with aminoplast resin-forming materials to produce wrinkle resistance and dimensional stability without subjecting the fabric to the usual hazards of chlorine retention.

ANTISTATIC LUBRICANT. H. Sagar (to Imperial Chem. Industries Ltd). USP 2 803 565, Aug. 20, 1957. (3032)

An antistatic lubricant, stable at high temperatures, is prepared by using a mixture of different ethylene oxide condensation products in a low viscosity mineral oil. The lubricant is suitable for synthetic fibers and may be sprayed.

MOTHPROOFING AND WATERPROOFING COMPOSITION. V. J. Keenan, F. J. Gozlow and R. B. Doan (to Atlantic Refining Co.). USP 2 804 391, Aug. 27, 1957. (3033)

Simultaneously mothproofing and waterproofing fabrics by treatment with an aqueous emulsion composed of a mixture of a waterproofing agent and a mothproofing concentrate consisting of DDT, xylene, and an emulsifier.

CREASEPROOFING CELLULOSE TEXTILES. C. R. Williams (to Monsanto Chemical Co.). USP 2 804 402, Aug. 27, 1957. (3034)

Crease resistant cellulose fabrics, resistant to chlorine absorption, are obtained by impregnating the fabrics with an aqueous solution of dimethylol ethylene urea, a thermosetting methyl ether of polymethylol melamine, and a curing catalyst, and heating to produce a water insoluble finish.

INCREASING THE FLUFFINESS OF LAND FOWL FEATHERS. P. A. Florio (to Mohasco Industries). USP 2 805 116, Sept. 3, 1957. (3035)

Land fowl feathers with increased fluffiness and filling power are produced by digesting the feathers in acid and precipitating out the inorganic metal salts formed.

FLAMEPROOFING VISCOSE RAYON. O. H. Sindl. USP 2 805 176, Sept. 3, 1957. (3036)

Flame resistant viscose rayon is produced by introducing a reactive group, e.g., carboxymethyl, glycerol ether, or carboxyethyl, into the regenerated cellulose solution and reacting the undried fiber produced with a soluble salt of a flameproofing metal.

ENHANCING FILLING POWER OF LAND FOWL FEATHERS. E. R. Frederick and M. C. Jaskowski. USP 2 805 913 and 2 805 914, Sept. 10, 1957. (3037)

Enhanced filling power of land fowl feathers is obtained by stabilizing the naturally occurring or artifically induced curl in the feathers with a water solution of glyoxal or alpha-hydroxyadipaldehyde in the presence of a catalytic agent.

COATING UNSPUN FIBERS FOR USE IN ELECTROSTATIC FLOCKING. H. Ewing (to Brit. Celanese Ltd). USP 2 805 959, Sept. 10, 1957. (3038)

Reducing the tendency to self-adhesion during electrostatic flocking of fine unspun synthetic fibers by coating the fibers with an inert substance such as silica, magnesium oxide, talc, calcium carbonate, barium sulfate, gypsum, china clay, or aluminum oxide.

CHEMICALLY CURLING ANIMAL HAIR. E. Ramirez and E. W. Colt (to Armour & Co.). USP 2 806 762, Sept. 17, 1957. (3039)

Chemically curling hog, cattle, or horse hair for upholstery or cushioning purposes by treatment with a saturated aqueous solution of sulfur dioxide.

ACID FULLING OF WOOL. L. W. Davis and J. P. Redston (to E. F. Drew & Co.). USP 2 806 804, Sept. 17, 1957. (3040)

Acid fulling process which permits a more even dyeing of wool than prior alkaline processes, as well as rendering the fabric light stable in damp storage before the dyeing operation.

DYEING AND PRINTING D 2

IMPROVING PATTERNED PRINTED FABRICS. C. Bener (Switzerland). BP 748 889, May 16, 1956. Through BCIRA 37: 166 (1957). (3041)

In processes where cellulosic fabrics are printed with resists, then rendered transparent in the free portions, and finally treated with alkaline or other shrinking agents to cause puckering in the resisted portions, greater contrast between the opaque and transparent portions is secured if the washed fabric is dried under tension sufficient to overcome the shrinking, e.g. by hot calendering.

LOADING AND UNLOADING YARN FOR VAT DYEING. B. W. Mills. BP 749 376, May 23, 1956. Through BCIRA 37: 164 (1957). (3042)

Hanks of yarn on rods are assembled on a separate framework alongside the dye vat and picked up by a carrier that holds them in position in the vat.

DYEING OF HIGHLY POLYMERIC POLYETHYLENE TEREPHTHALATES. A. Lowe and R. Sause (to Imperial Chem. Industries Ltd). BP 748 944, May 16, 1956. Through BCIRA 37: 164 (1957). (3043)

The affinity of textiles of the Terylene group for dispersed, acid vat, and chrome dyes is increased by treatment with compounds containing at least one secondary or tertiary and one or more primary amino groups, and/or one or more alcoholic groups, at 50-220° C. For example, Terylene yarn is passed through a 50% solution of triethanolamine, dried over a hot drum at 100° C, and baked at 165° C.

METHOD OF FORMING PATTERNS ON FABRIC. S. Ordan. BP 749 355, May 23, 1956. Through BCIRA 37: 166 (1957). (3044)

A stencil is cut in an impervious sheet supported on a backing sheet (e.g. Profilm), the stencil is laid on a silk screen and the backing is peeled off, and the new stencil is framed and placed face downwards on the textile fabric. A colored paste of a thermosetting plastic is then forced through the screen by means of a squeegee and set by exposure to infrared radiation or oven heat. The process may be employed in the production of heat-resistant table mats and the like.

POLYESTERS SUSCEPTIBLE TO BASIC DYES. H. M. Hutchinson (to Distillers Co. Ltd). BP 749 456, May 23, 1956. Through BCIRA 37: 164 (1957). (3045)

The affinity of polyester materials for basic dyes is greatly improved by exposing them to vapors of sulfuric acid, sulfur trioxide, or chlorosulfonic acid.

FUGITIVE TINTING. H. C. Olpin, A. J. Wesson and A. McGill (to Brit. Celanese Ltd). BP 749 683, May 30, 1956. Through BCIRA 37: 164 (1957). (3046)

Cellulose ester and ether materials are tinted with cotton dyes in association with soluble polymers containing recurrent -N·CO- groups.

PROCESS FOR TREATING TEXTILE FABRICS WITH AQUEOUS SUSPENSIONS OF PIGMENTS. Ciba Ltd. BP 750 150, June 13, 1956. Through BCIRA 37: 198 (1957). (3047)

The invention is concerned with avoiding, in pigment dyeing, the migration of pigment particles without the use of excessive amounts of thickeners. The aqueous suspension, containing a single liquid phase and (preferably) a small proportion of a soluble cellulose ether, is adjusted to a pH below 3.5 by the addition of a suitable acid.

METHOD OF TREATING WITH LIQUID A MATERIAL IN GRANULAR, THREADED, OR FIBROUS FORM. AB Pluria. BP 751 202, June 27, 1956. (Addition to BP 724 027). Through BCIRA 37: 231 (1957). (3048)

A vigorous pulsating movement is imparted to the liquid (e.g. dye liquor) in the process of the parent invention.

CONVEYOR BAND FOR SCREEN PRINTING MACHINES. M. Staffel (Switzerland). BP 751 689, July 4, 1956. Through BCIRA 37: 232 (1957). (3049)

The band comprises several thin steel bands side by side, and an assembling layer fixed to their inside surface. This layer comprises a rubbery material reinforced by a woven wire or glass yarn fabric.

MULTI-COLOR PRINTING MACHINES. A. Schwenke, H. Berndt, F. Kunze, H. Neumeister and W. Hartig (to Veb Textilmaschinenbau Zittau). BP 752 025, July 4, 1956. Through BCIRA 37: 259 (1957). (3050)

The invention relates to a printing machine having a number of units each consisting of an impression cylinder and at least one printing roller. Each cylinder is mounted in the frame of the machine so as to be movable in a direction normal to its axis towards the printing rollers, and each of these is mounted for axial and circumferential movement with respect to its axis but is immovably fixed in a direction normal to its axis.

DYEING AND PRINTING POLYACRYLONITRILE FIBERS. Ciba Ltd. BP 752 684, July 11, 1956. Through BCIRA 37: 259 (1957). (3051)

Polyacrylonitrile fibers are readily dyed or printed with triphenylmethane dyes devoid of sulfonic acid groups but containing at least one, but not more than two, primary amino groups in para-position to the central carbon atom.

PROCESS FOR PRODUCING FAST DYEINGS AND PRINTS ON TEXTILE MATERIALS. Farbwerke Hoechst AG. BP 770 046, Mar. 13, 1957. Through BCIRA 37: 198 (1957). (3052)

The diazo compound from 4-amino-3'-nitro-2:5-dimethoxy-1:1'-azobenzene or from 4-amino-4'-nitro-2:5-dimethoxy-1:1'-azobenzene is combined on the fiber with 1-acetoacetylamino-2:5-dimethoxy-4-chlorobenzene (red and claret shades).

PROCESS FOR PRINTING TEXTILES. N. Bradbury and W. H. Cliffe (to Imperial Chem. Industries Ltd). BP 770 059, Mar. 13, 1957. Through BCIRA 37: 198 (1957). (3053)

2-Hydroxy-3-naphthoic-2':5'-dimethylanilide is used as the coupling component in printing cellulosic materials by the azoic process.

DEVICE FOR IMPREGNATION OF WEB MATERIALS. J. Dungler. BP 770 130, Mar. 13, 1957. Through BCIRA 37: 198 (1957). (3054)

In dyeing, washing, or similar operations, with the fabric at full width, a vat, filled with the impregnating liquid, has space-limiting members that move longitudinally with, but without contact with, the fabric. Efficient impregnation is achieved whatever may be the traveling speed and tension of the fabric.

WARP PRINTED OR PATTERNED FABRICS. J. Porta Galubart (Spain). BP 770 564, Mar. 20, 1957. Through BCIRA 37: 232 (1957). (3055)

A printing roller device and dryer are located above the warp threads in a loom, before the shedding mechanism.

FUGITIVE TINTING OF CELLULOSE ACETATE. H. C. Olpin, A. McGill and A. J. Wesson (to Brit. Celanese Ltd). USP 2 802 713, Aug. 13, 1957. (3056)

Fugitive tint for cellulose acetate (or other cellulose ester or ether) consists of a direct cotton dye and polyvinyl pyrrolidone.

FUGITIVE TINTING OF CELLULOSE ACETATE. H. C. Olpin, A. J. Wesson and A. McGill (to Brit. Celanese Ltd). USP 2 802 714, Aug. 13, 1957. (3057)

Fugitive tint for cellulose acetate (or other cellulose ester or ether) consists of a direct cotton dye and polyacrylamide.

HIGH TEMPERATURE VAT DYEING PROCESS USING MAGNESIUM COMPOUNDS IN THE DYE BATH. J. M. Mecco (to Am. Cyanamid Co.). USP 2 803 516, Aug. 20, 1957. (3058)

This invention concerns improved reduction baths containing alkali metal hydrosulfite and over-reduction buffers and the compositions for producing them. If a substantial amount of magnesium ions is introduced into the bath, the excess consumption of hydrosulfite at high temperatures is very greatly reduced, and, as a result, on standing the hydrosulfite concentration is much higher than if the bath contained no magnesium ions.

APPARATUS FOR DYEING WARP SHEETS FOR PATTERNED VELVETS. L. A. Runton (to Mohasco Industries). USP 2 804 764, Sept. 3, 1957. (3059)

APPARATUS FOR GUIDING AND SPREADING A CARPET BEING FED TO A PIECE DYEING MACHINE. M. B. Penman (to Magee Carpet Co.). USP 2 806 694, Sept. 17, 1957. (3060)

DYEING NITROGENOUS FIBERS WITH METALLIFEROUS MONOAZO DYES. J. Brassel and A. Buehler (to Ciba Ltd). USP 2 806 760, Sept. 17, 1957. (3061)

Nitrogenous fibers such as leather, silk, nylon, and especially wool can be satisfactorily dyed in a weakly alkaline to weakly acid medium with metalliferous monoazo dyes containing one atom of metal complexly bound to two molecules of different monoazo dyes.

MECHANICAL PROCESSES D 3

CLOTH GUIDING DEVICE. C. L. Durrant (to G. Durrant & Sons Ltd). BP 749 863, June 6, 1956. Through BCIRA 37: 199 (1957). (3062)

A cloth-guiding unit (for use with a tenter, calender, inspection machine, etc.) comprises (1) a pair of parallel rollers arranged at an angle to the line of travel of the cloth, one roller being pivoted so that the nip between them can open, and (2) a rotatable friction surface (e.g. a semi-circular disc) that comes into driven relationship with one of the rollers if the width of cloth edge in the nip exceeds a given amount, whereby the pivoted roller moves and the cloth edge is released.

MECHANICAL FINISH FOR SYNTHETIC FIBER FABRICS. A. G. Cilander (Switzerland). BP 748 964, May 16, 1956. Through BCIRA 37: 167 (1957). (3063)

Woven, knitted, laminated, and coated fabrics composed mainly of thermoplastic fibers (e.g. nylon) are hot calendered with plain or engraved rollers and treated with a swelling agent under conditions that result in mild shrinking without tendering to produce a glaze like that of silk or that given by mercerization. The agent may be applied by printing or after resist printing.

OPTICAL METHOD OF DETECTING AND SIGNALLING WEFT DISTORTION. G. A. J. Orchard (to Brit. Rayon Res. Assoc.). BP 749 250, May 23, 1956. Through BCIRA 37: 168 (1957). (3064)

Photoelectric means for detecting weft distortion and controlling weft-straightening devices on a tentering machine.

RAISING OR NAPPING MACHINE. N. Pilkington (to Tomlinsons (Rochdale) Ltd). BP 749 896, June 6, 1956. Through BCIRA 37: 199 (1957). (3065)

The invention relates to the drives for the card-wire covered pile and counter-pile rollers of a raising machine. The power for the two sets of rollers is taken from a single source via sun-and-planet gearing so as to balance the difference of their rotational speeds in accordance with the difference of reaction between the two sets in relation to the cloth.

BATCHING MACHINES FOR WINDING CLOTH. W. A. Dawes (to Sir James Farmer Norton & Co. Ltd). BP 750 112, June 13, 1956. Through BCIRA 37: 200 (1957). (3066)

The inclined serrated cutter that rises at the desired time to cut off the required length from a long piece is fitted underneath with a perforated pipe from which issues, during the cutting, a stream of air or steam that directs the front end of the next batch on to an empty roller which is ready to receive it. The batching machine thus operates continuously.

TREATMENT OF FABRICS IN TUBULAR FORM. T. Geeson (to Adshead & Geeson Ltd). BP 750 526, 750 527, 750 528 and 750 529, June 20, 1956. (Additions to BP 683 075). Through BCIRA 37: 233 (1957). (3067)

The parent invention claimed the stabilization and setting of tubular knitted nylon fabric by treatment with steam followed by contact with a surface at about 300° F. The present four inventions extend the application of the process to (1) goods made from Aralac, Ardil, and the like, (2) the Terylene group, (3) the Rhovyl group, and (4) the Orlon group.

MECHANICAL FINISHES ON FLEXIBLE SYNTHETIC SHEET MATERIAL. Cilander AG. BP 752 074, July 4, 1956. Through BCIRA 37: 260 (1957). (3068)

Films and fabrics (including coated and nonwoven fabrics) of fully synthetic, thermoplastic material, especially nylon, are given a mechanical finish while hot (e.g. embossing and calendering) and, either before or after this treatment, are superficially dulled, at least in selected areas, by the application of solvents or swelling agents.

FABRIC ORNAMENTATION. J. G. Evans, G. Landells, W. J. Moorhouse, J. R. W. Perfect, C. S. Parker and A. Melville (to Bleachers' Assoc. Ltd and Bradford Dyers' Assoc. Ltd). BP 752 191, July 4, 1956. Through BCIRA 37: 260 (1957). (3069)

The invention relates to apparatus for the production of ruffle, frill, rib, and like effects in materials capable of frictional compressive shrinkage, e.g. woven or knitted fabrics especially of viscose and cellulose acetate rayon, nylon, and Terylene.

TEXTILE EMBOSSING. J. G. Evans, G. Landells, W. J. Moorhouse and J. R. W. Perfect (to Bradford Dyers' Assoc.). BP 752 192, July 4, 1956. Through BCIRA 37: 260 (1957). (3070)

The engraved metal plate or roller generally used for embossing textile fabrics is replaced by a belt of resilient material bearing the design, and the fabric, capable of compressive shrinkage, is subjected to heat and pressure in the nip between the belt and a smooth, rigid roller.

MECHANICAL FINISHING OF VISCOSE FABRICS. A. Brookes and A. R. Smith (to Brit. Industrial Plastics Ltd). BP 767 789, Feb. 6, 1957. Through BCIRA 37: 137 (1957). (3071)

Regenerated cellulose (e.g. viscose) fabrics are impregnated with an aqueous solution of a methyl, ethyl, or propyl ether of dimethylol urea and an acid curing agent (e.g. ammonium thiocyanate), dried, embossed, and heated to effect a final cure of the resin.

WEB FEEDING MECHANISM FOR DRYING. W. F. Huck (to Huck Co.). USP 2 801 847, Aug. 6, 1957. (3072)

Arrangement for handling coated webs in ovens which permits the control of the moving web at a large number of points while requiring support and driving contact with only one surface. The dimensions of the oven are kept to a reasonable figure, and the web may be handled at high speed.

HEAT SETTING FIBER GLASS SCREENING. J. A. Dancewicz (to Soule Mill). USP 2 804 120, Aug. 27, 1957. (3073)

Apparatus for rapidly heat treating woven fiber glass screening so that the strands will fuse at their points of contact and prevent subsequent deformation.

HOSIERY STACKING AND TAMPING APPARATUS. T. H. De Spain (to Southern Textile Machy. Co.). USP 2 805 804, Sept. 10, 1957. (3074)

DEVICE FOR TRIMMING THE PILELESS SELVAGE FROM PILE FABRICS. W. J. Brennan (to James Lees & Sons Co.). USP 2 806 283, Sept. 17, 1957. (3075)

DRYING D 4

DRYING-TYPE TENTERING MACHINES. W. A. Dawes (to Sir James Farmer Norton & Co. Ltd). BP 747 106, Mar. 28, 1956. Through BCIRA 37: 21 (1957). (3076)

VACUUM EXHAUSTERS FOR DRYING APPARATUS. H. Charlesworth (to W. Whiteley & Sons Ltd). BP 750 933, June 20, 1956. Through BCIRA 37: 233 (1957). (3077)

The invention relates particularly to a tentering machine in which the material is drawn over a vacuum box as part of the drying process. In such machines it is necessary to break the vacuum immediately the machine stops, otherwise dust might be sucked in and cause soiling, or the material might overrun and escape proper drying. It is proposed to operate the vacuum release valve by means of a solenoid controlled by a dynamic relay driven by a part of the draw-through roller drive.

COMBINED TENTER CLAMP AND NEEDLE CHAIN FOR TENTERING MACHINES. H. and W. Krantz (Germany). BP 751 930, July 4, 1956. Through BCIRA 37: 233 (1957). (3078)

The needle strip is mounted on swinging arms controlled by a locking lever and spring so that on raising the strip to the clamps it is locked in the working position but swings down into an inoperative position when released.

CRIMPED STAPLE FIBER. R. G. Wakerly (to Imperial Chem. Industries Ltd). BP 767 538, Feb. 6, 1957. Through BCIRA 37: 125 (1957). (3079)

The invention relates to the drying of a wet tow of artificial filaments, e.g. Terylene, after steam setting.

APPARATUS FOR DRYING WEBS. B. F. H. Mellbin (Sweden). BP 768 878, Feb. 20, 1957. Through BCIRA 37: 167 (1957). (3080)

The apparatus uses superheated steam, blow boxes, and nozzles. It is smaller than others of the same kind, and provides means for the drying medium to be active twice in each cycle.

WEB GUIDING APPARATUS. J. D. Robertson and G. B. Wood, Jr. BP 770 926, Mar. 27, 1957. Through BCIRA 37: 233 (1957). (3081)

Selvage feelers and tilting rollers are used to shift, e.g., cloth in a tenter frame, quickly into a predetermined path.

TESTING AND MEASUREMENT E

YARNS E 2

YARN AND MONOFILAMENT EVENNESS TESTERS. Commonwealth Scientific and Industrial Res. Org. BP 754 919, Aug. 15, 1956. Through BCIRA 37: 368 (1957). (3082)

A yarn or monofilament regularity tester comprises means for forwarding the material at constant tension, a receiving electromechanical transducer (e.g. a piezoelectric crystal element) for setting and maintaining a short length in transverse oscillation as it is drawn over the armature, and means for measuring the frequency. Circuit diagrams are given.

APPARATUS FOR TESTING YARNS, THREADS, FIBERS, FILAMENTS, ETC. L. Cotton (to Courtaulds Ltd). BP 750 167, June 13, 1956. Through BCIRA 37: 205 (1957). (3083)

An apparatus for indicating breaking load and extension at break at constant rate of extension comprises a deflectable member to which one end of the specimen is anchored and the deflection of which is only a small fraction (say 1%) of the extension at break; mechanism for stretching the specimen; a load-recording pulse counter, operated by electric pulses initiated by a deflection detector connected to the deflectable member (a steel ring or U-shaped bar), the number of pulses being proportional to the degree of deflection; similar means for recording extensions; and means for isolating both counters from the electric pulses when the specimen breaks.

NEP COUNTER. R. Nield (to T.M.M. (Research) Ltd). BP 768 035, Feb. 13, 1957. Through BCIRA 37: 142 (1957). (3084)

Means are provided for drafting sliver into a thin web and for illuminating a length of the web so that neps, etc., can be counted.

UNIFORMITY TESTING APPARATUS. A. E. Martin, Jr. USP 2 805 449, Sept. 10, 1957. (3085)

Electromechanical apparatus for continuously and nondestructively measuring and controlling variations in thickness of picker laps, sliver, roving, and yarn.

FABRICS E 3

APPARATUS FOR TURNING INSIDE OUT AND INSPECTING HOSIERY ARTICLES. Etablissements Garnier-Luneau. BP 767 785, Feb. 6, 1957. Through BCIRA 37: 137 (1957). (3086)

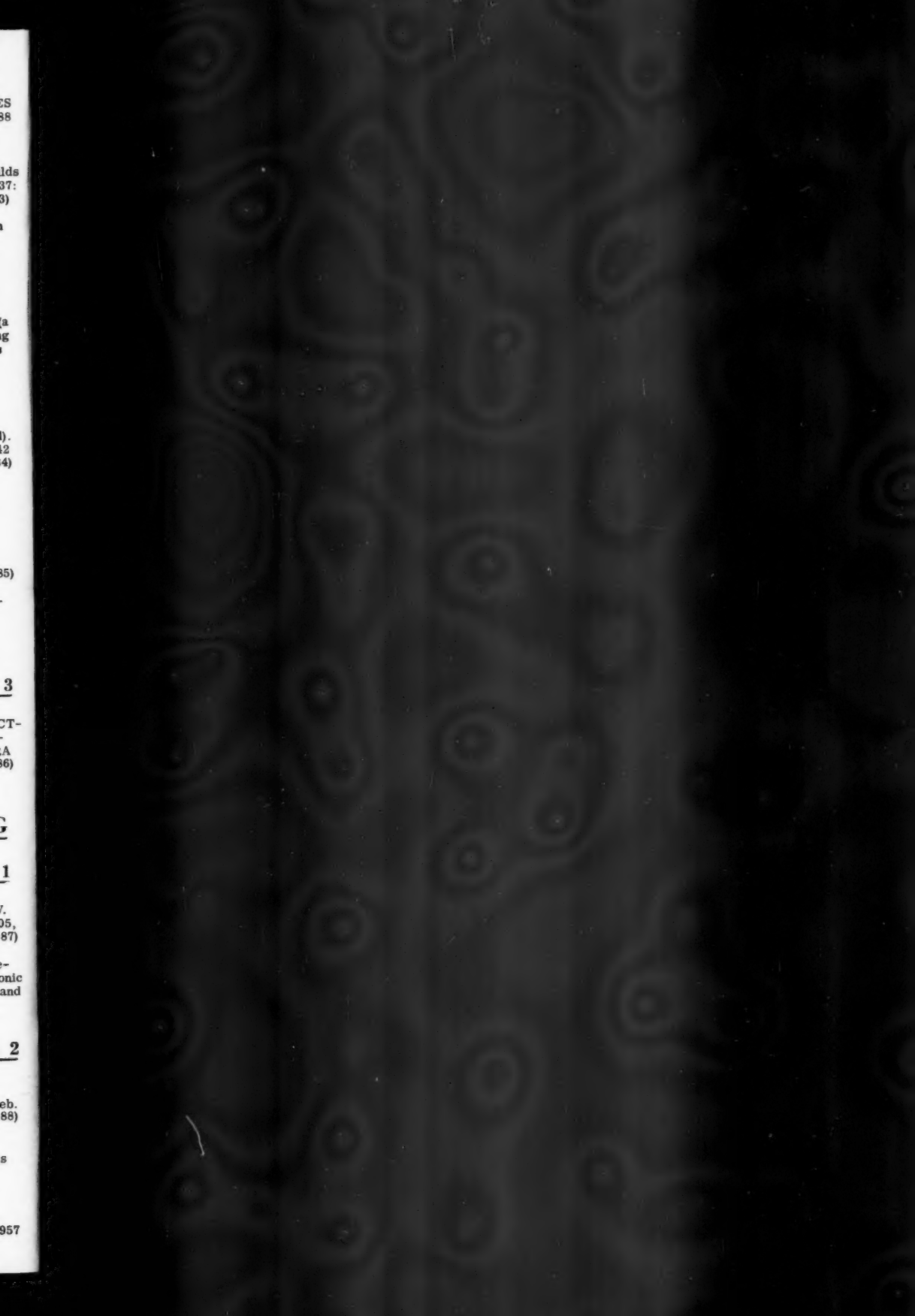
SCIENCES G

CHEMISTRY G 1

DETERGENT COMPOSITION. G. P. Touey and H. W. Coover, Jr. (to Eastman Kodak Co.). USP 2 805 205, Sept. 3, 1957. (3087)

Detergent composition for removing and preventing redeposition of soil during laundering consists of a nonionic or anionic detergent and a copolymer of acrylonitrile and an acrylamide.

PHYSICS G 2

DISCHARGE OF STATIC ELECTRICITY FROM TEXTILES. Institut Textile de France. BP 769 055, Feb. 27, 1957. Through BCIRA 37: 157 (1957). (3088)

A stream of gas, previously exposed to a radioactive substance, is projected onto the charged material. Its application to spinning and twisting is illustrated.